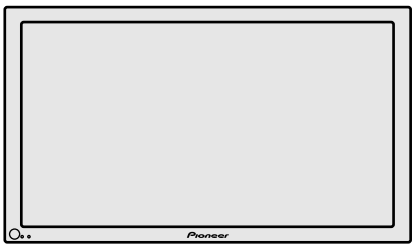
Pioneer sound.vision.soul

Service Manual



PDP-434PU

ORDER NO.
ARP3174

PLASMA DISPLAY

PDP-434PU
PDP-434PE
PRO-434PU

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Remarks
PDP-434PU	TUCK	AC110 - 240V	
PDP-434PE	WYVI6	AC220 - 240V	
PDP-434PE	WYVI6XK	AC220 - 240V	
PRO-434PU	KUC	AC120V	

For details, refer to "Important symbols for good services".

Confirm it

Serial No.

○○**WYVI6** : □□**SS**######△△

○○**WYVI6XK** : □□**UK**######△△

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ⓒ**PIONEER CORPORATION 2003**

T-ZZY SEPT. 2003 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 - Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

SAFETY PRECAUTIONS

NOTICE : Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis.

The following precautions should be observed :

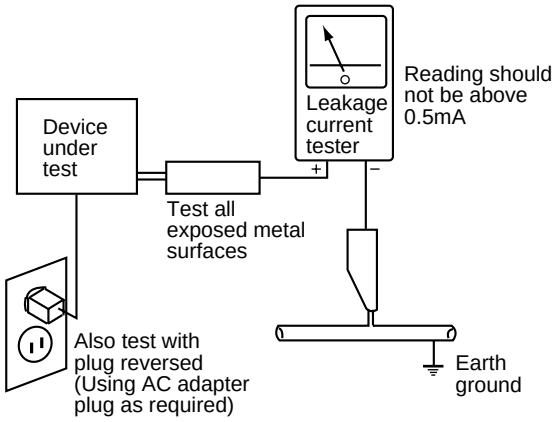
1. When service is required, even though the PDP UNIT an isolation transformer should be inserted between the power line and the set in safety before any service is performed.
2. When replacing a chassis in the set, all the protective devices must be put back in place, such as barriers, nonmetallic knobs, adjustment and compartment covershields, isolation resistor-capacitor, etc.
3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.
4. Always use the manufacture's replacement components. Especially critical components as indicated on the circuit diagram should not be replaced by other manufacture's. Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.
5. Before returning a serviced set to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the set by the manufacture has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for the continued protection of the customer and servicetechnician.
6. Perform the following precautions against unwanted radiation and rise in internal temperature.
   - Always return the internal wiring to the original styling.
   - Attach parts (Gascket, Ferrite Core, Ground, Rear Cover, Shield Case etc.) surely after disassembly.
7. Perform the following precautions for the PDP panel.
   - When the front case is removed, make sure nothing hits the panel face, panel corner, and panel edge (so that the glass does not break).
   - Make sure that the panel vent does not break. (Check that the cover is attached.)
   - Handle the FPC connected to the panel carefully. Twisting or pulling the FPC when connecting it to the connector will cause it to peel off from the panel.
8. Pay attention to the following.
   - When the front case is removed, infrared ray is radiated and may disturb reception of the remote control unit.
   - Pay extreme caution when the front case and rear panel are removed because this may cause a high risk of disturbance to TVs and radios in the surrounding.

Leakage Current Cold Check

With the AC plug removed from an AC power source, place a jumper across the two plug prongs. Turn the AC power switch on. Using an insulation tester (DC 500V), connect one lead to the jumpered AC plug and touch the other lead to each exposed metal part (input/output terminals, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis. Exposed metal parts having a return path to the chassis should have a minimum resistor reading of 0.3MΩ and a maximum resistor reading of 5MΩ. Any resistor value below or above this range indicates an abnormality which requires corrective action. Exposed metal parts not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into an AC power source (do not use an isolation transformer for this check).
Turn the AC power switch on.
Using a "Leakage Current Tester (Simpson Model 229 equivalent)", measure for current from all exposed metal parts of the cabinet (input/output terminals, screwheads, metal overlays, control shaft, etc.), particularly any exposed metal part having a return path to the chassis, to a known earth ground (water pipe, conduit, etc.). Any current measured must not exceed 0.5mA.


Reading should not be above 0.5mA
Leakage current tester
+
–
Device under test
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE SET TO THE CUSTOMER.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in PIONEER set have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire or other hazards.
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

■Charged Section

The places where the commercial AC power is used without passing through the power supply transformer.
If the places are touched, there is a risk of electric shock. In addition, the measuring equipment can be damaged if it is connected to the GND of the charged section and the GND of the non-charged section while connecting the set directly to the commercial AC power supply. Therefore, be sure to connect the set via an insulated transformer and supply the current.

1. AC Power Cord
2. AC Inlet with Filter
3. Power Switch (S1)
4. Fuse (In the POWER SUPPLY Unit)
5. STB Transformer and Converter Transformer (In the POWER SUPPLY Unit)
6. Other primary side of the POWER SUPPLY Unit

■High Voltage Generating Point

The places where voltage is 100V or more except for the charged places described above. If the places are touched, there is a risk of electric shock.

1. SW POWER SUPPLY Unit..... (215V)
2. 43 X DRIVE Assy .....(–225V to 215V)
3. 43 Y DRIVE Assy .....(345V)
4. 43 SCAN (A) Assy .....(345V)
5. 43 SCAN (B) Assy .....(345V)
6. X CONNECTOR AAssy ..... (–225V to 215V)
7. X CONNECTOR B Assy ..... (–225V to 215V)

: Part is Charged Section.

: Part is the High Voltage Generating Points other than the Charged Section.

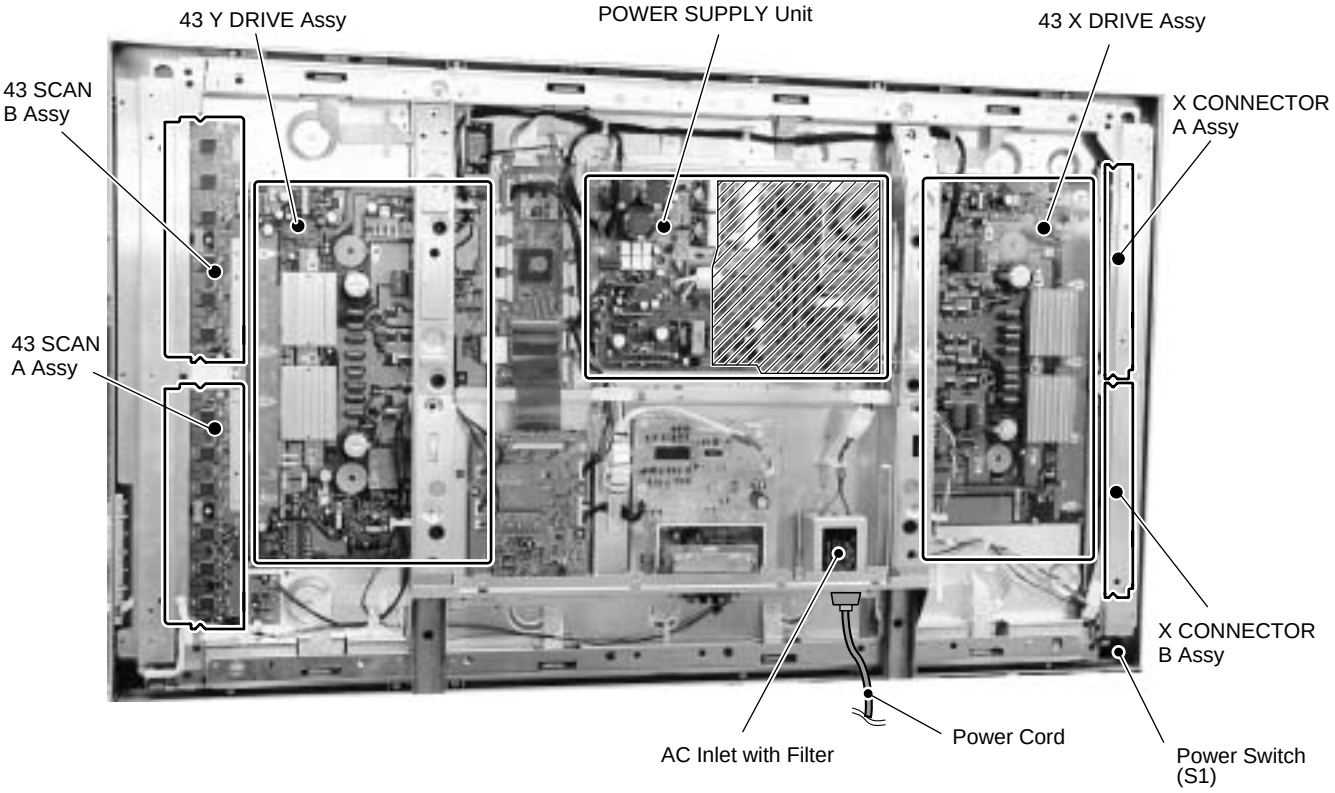


Fig.1 Charged Section and High Voltage Generating Point (Rear View)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

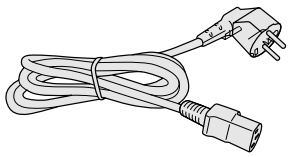
43" Plasma Display

Item	Model: PDP-434PU	Model: PDP-434PE
Number of Pixels	1024 x 768 pixels	1024 x 768 pixels
Audio Amplifier	13 W + 13 W (1kHz, 10%, 8Ω)	13 W + 13 W (1kHz, 10%, 8Ω)
Surround System	SRS/FOCUS/TruBass	SRS/FOCUS/TruBass
Power Requirement	110-240V AC,50/60Hz,298W (0.3W Standby,120V)	220-240V AC,50/60Hz,295W (0.5W Standby)
Dimensions	1120(W) x 652 (H) x 98 (D) mm (44 1/8(W)x 25 11/16(H)x 3 7/8(D)inches)	1120(W) x 652 (H) x 98 (D) mm
Weight	30.5 kg (67.3 lbs.)	30.5 kg (67.3 lbs.)

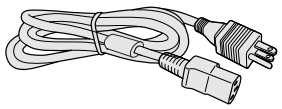
Item	Model: PRO-434PU
Number of Pixels	1024 x 768 pixels
Audio Amplifier	13 W + 13 W (1kHz, 10%, 8Ω)
Surround System	SRS/FOCUS/TruBass
Power Requirement	120V AC,60Hz,298W (0.3W Standby)
Dimensions	1120(W) x 652 (H) x 98 (D) mm (44 1/8(W)x 25 11/16(H)x 3 7/8(D)inches)
Weight	30.5 kg (67.3 lbs.)

• Accessories

Power Cord

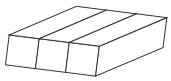


(PDP-434PE: ADG1214)



(PDP-434PU: ADG1215)
(PRO-434PU: ADG1215)

Speaker Cushion x1
(AEB1384)

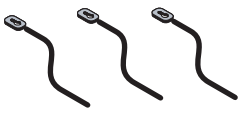


(Except PRO-434PU)

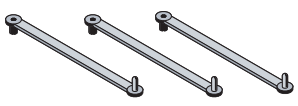
Wiping Cloth x1
(AED1208)

Binder Assy (AEC1908)

• Bead Bands x3



• Speed Clamp x3



Ferrite Core
(ATX1039)

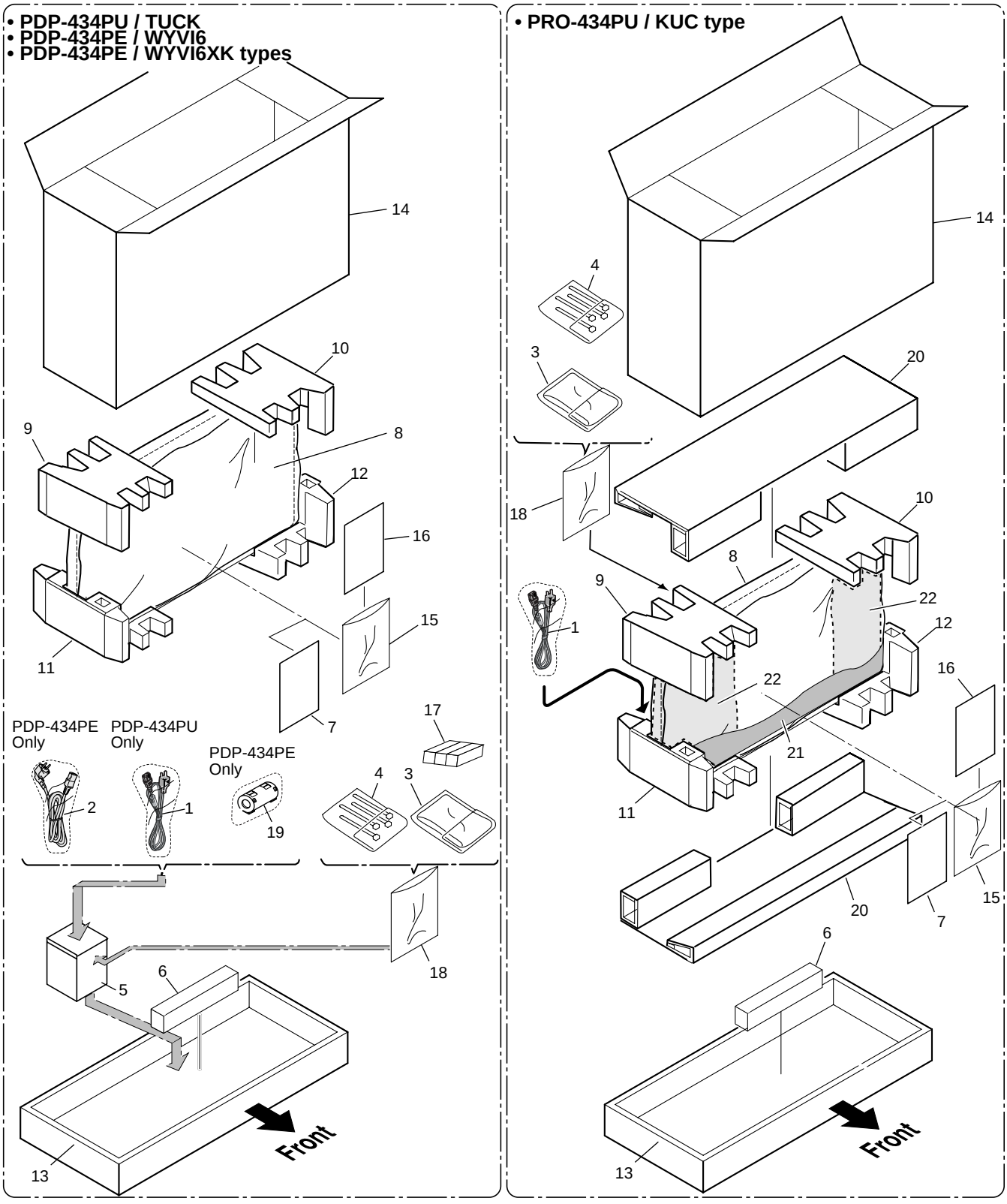
• Cable Tie

(PDP-434PE only)

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



PACKING Parts List

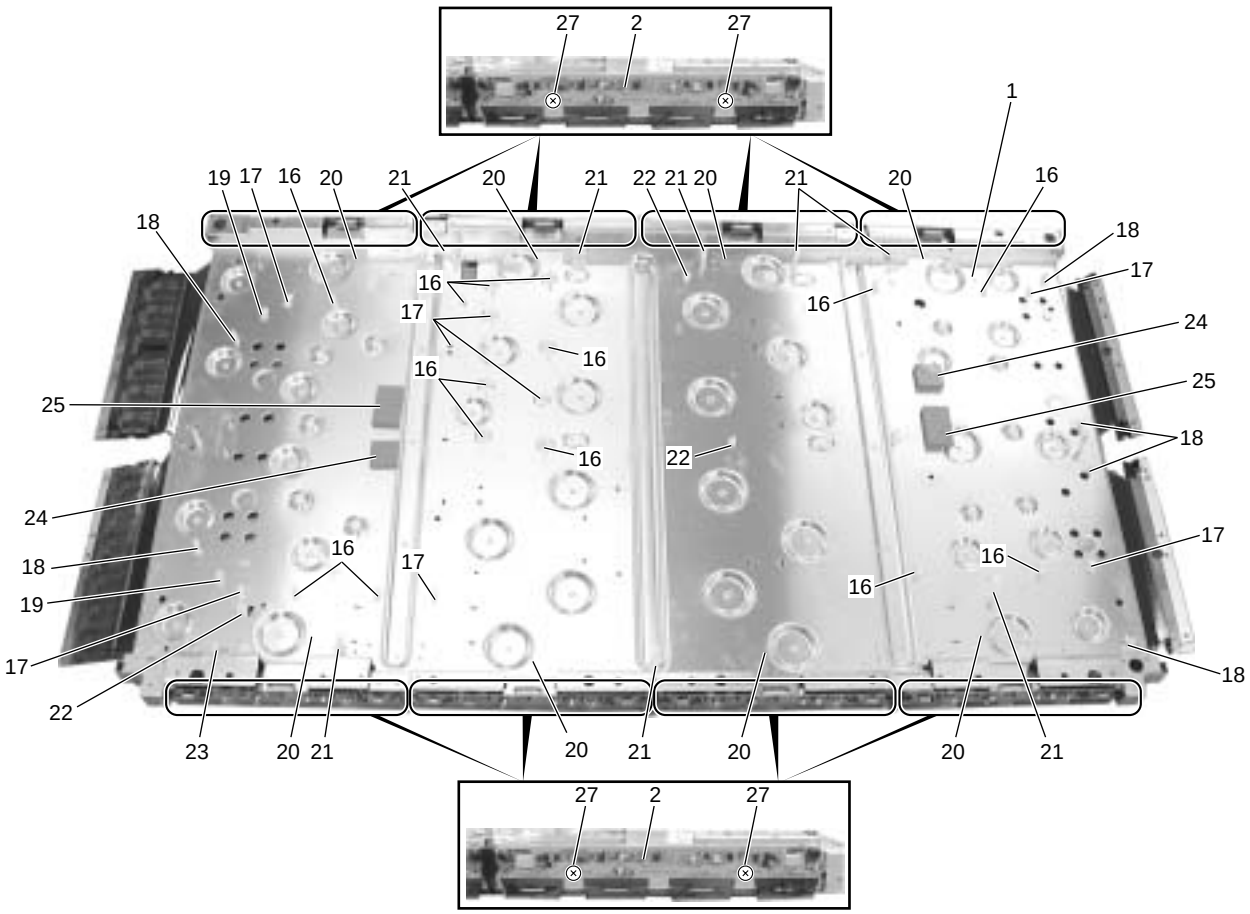
Mark	No.	Description	Part No.
⚠	1	Power Cord	See Contrast table (2)
⚠	2	Power Cord	See Contrast table (2)
	3	Wiping Cloth	AED1208
	4	Binder Assy	AEC1908
	5	Code Case	See Contrast table (2)
	6	Center Pad (43)	AHA2336
NSP	7	Warranty Card	See Contrast table (2)
	8	Mirror Mat	See Contrast table (2)
	9	Pad (PP T- L)	AHA2315
	10	Pad (PP T- R)	AHA2316
	11	Pad (PP B- L)	AHA2317
	12	Pad (PP B- R)	AHA2318
	13	Carton (43)	See Contrast table (2)
	14	Upper Carton (43)	See Contrast table (2)
	15	Vinyl Bag	AHG1310
	16	Caution Card	ARM1232
	17	Speaker Cushion	See Contrast table (2)
	18	Vinyl Bag S	See Contrast table (2)
	19	Ferrite Core	See Contrast table (2)
	20	Inner Carton	See Contrast table (2)
	21	Polyethirene Sheet	See Contrast table (2)
	22	Paper	See Contrast table (2)

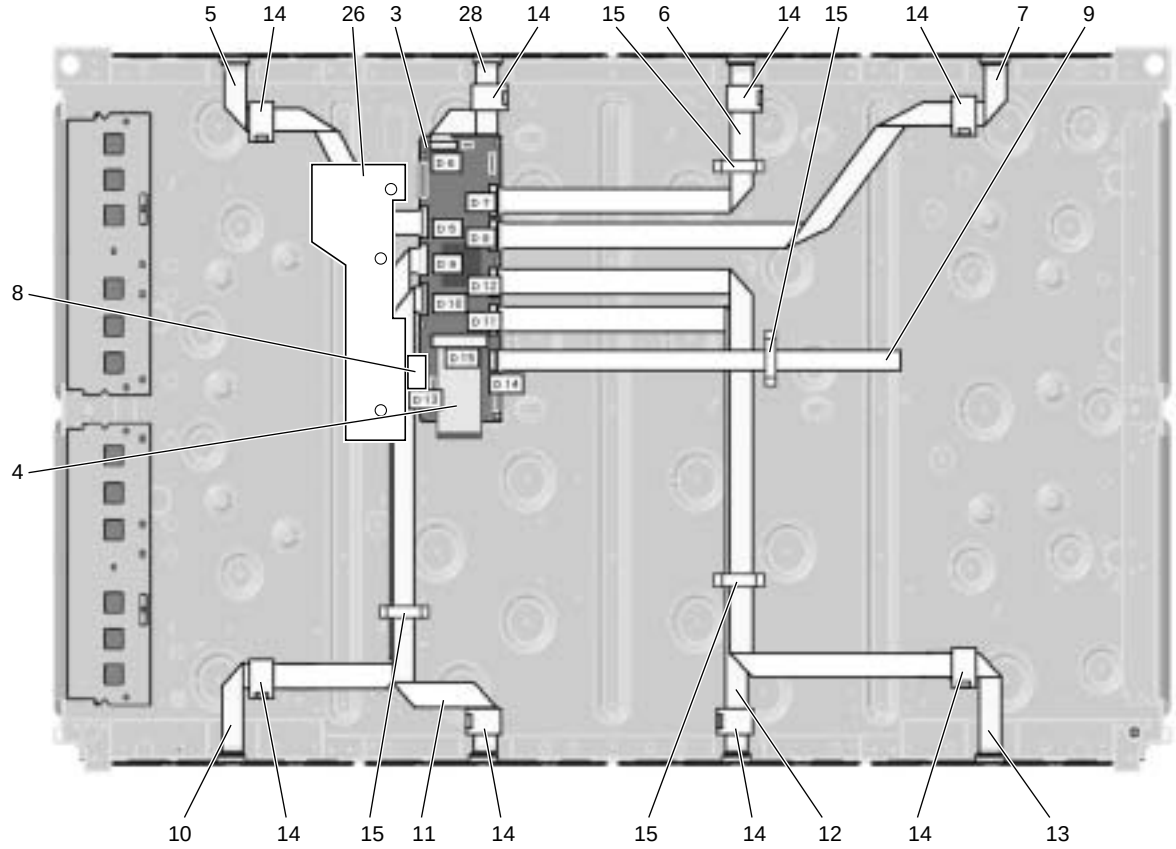
(2) CONTRAST TABLE

PDP-434PU/ TUCK, PDP-434PE/ WYVI6, PDP-434PE/ WYVI6XK and PRO-434PU/ KUC are constructed the same except for the following :

Mark	No.	Symbol and Description	PDP-434PU TUCK	PDP-434PE WYVI6	PDP-434PE WYVI6XK	PRO-434PU KUC
⚠	1	Power Cord	ADG1215	Not used	Not used	ADG1215
⚠	2	Power Cord	Not used	ADG1214	ADG1214	Not used
	5	Code Case	AHC1041	AHC1041	AHC1049	Not used
NSP	7	Warranty Card	ARY1138	ARY1114	ARY1114	ARY1134
	8	Mirror Mat	AHG1284	AHG1284	AHG1327	AHG1284
	13	Carton (43PU)	AHD3193	AHD3193	Not used	Not used
	13	Carton (43)	Not used	Not used	AHD3189	Not used
	13	Carton (43EL)	Not used	Not used	Not used	AHD3214
	14	Upper Carton (43PU)	AHD3179	Not used	Not used	Not used
	14	Upper Carton (43PE)	Not used	AHD3180	Not used	Not used
	14	Upper Carton (43)	Not used	Not used	AHD3188	Not used
	14	Upper Carton (43EL)	Not used	Not used	Not used	AHD3215
	17	Speaker Cushion	AEB1384	AEB1384	AEB1384	Not used
	18	Vinyl Bag S	AHG1338	AHG1338	Not used	AHG1338
	19	Ferrite Core	Not used	ATX1039	ATX1039	Not used
	20	Inner Carton	Not used	Not used	Not used	AHB1250
	21	Polyethirene Sheet	Not used	Not used	Not used	AHG1341
	22	Paper	Not used	Not used	Not used	AHG1342

2.2 CHASSIS SECTION (1)

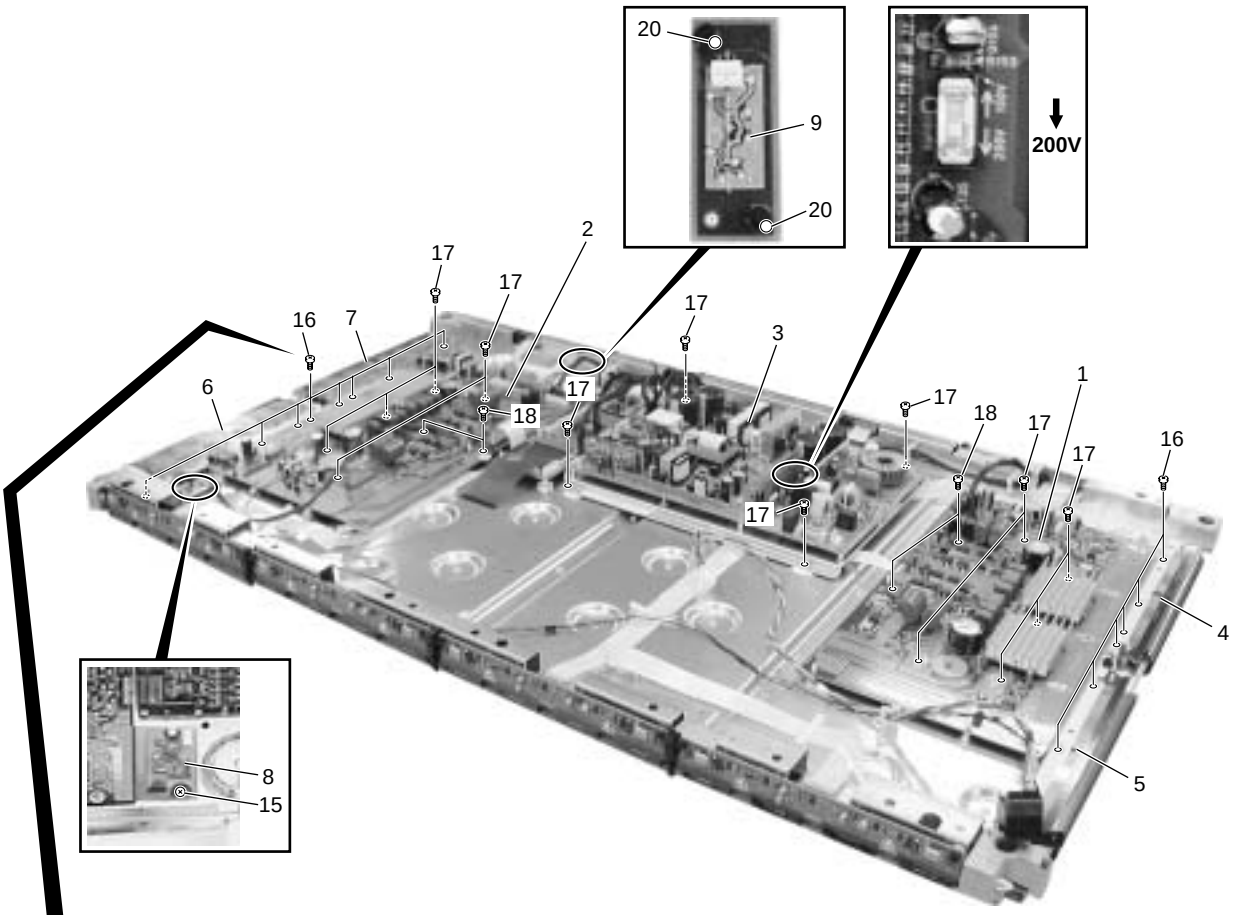


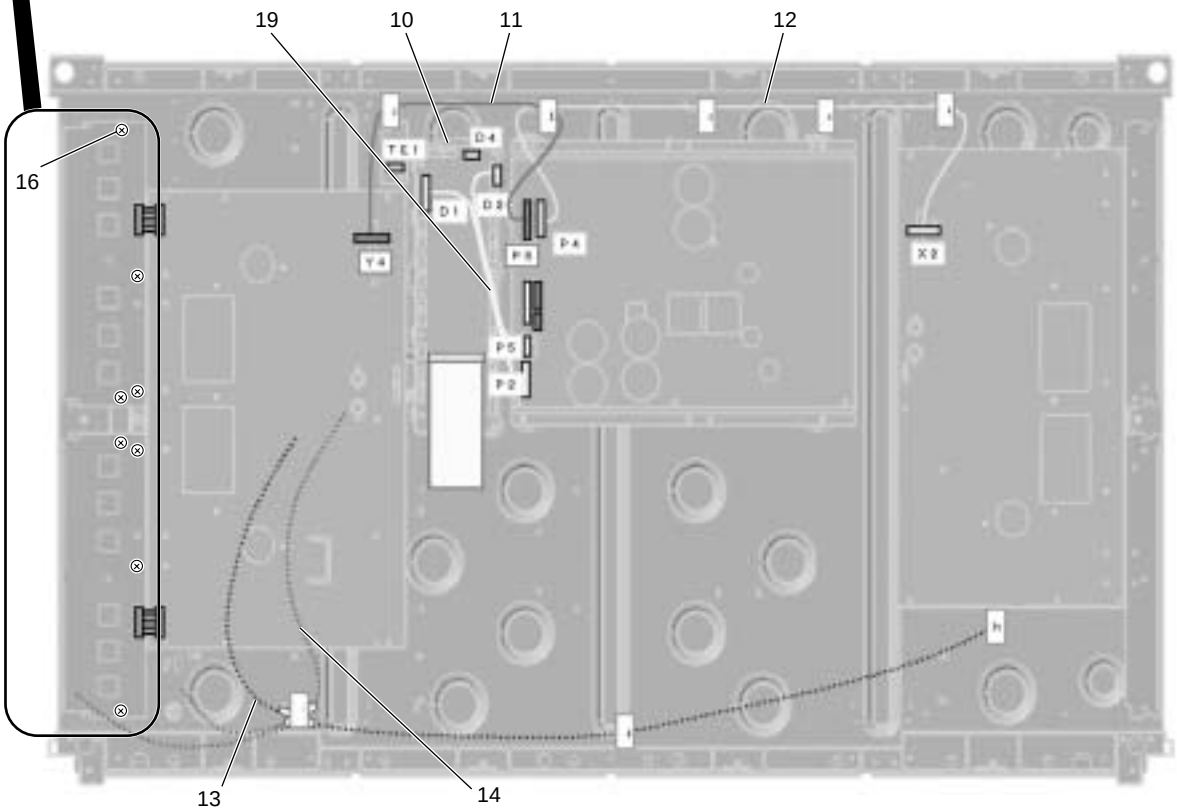


CHASSIS SECTION (1) Parts list

Mark	No.	Description	Part No.
NSP	1	P.Chassis (43) Assy	AWU1070
NSP	2	43 ADDRESS Assy	AWZ6793
	3	DIGITAL VIDEO Assy	AWV2070
	4	FPC (114P)	ADY1081
	5	Flexible Cable (J201)	ADD1215
	6	Flexible Cable (J203)	ADD1217
	7	Flexible Cable (J204)	ADD1218
	8	Flexible Cable (J209)	ADD1223
	9	Flexible Cable (J210)	ADD1224
	10	Flexible Cable (J205)	ADD1219
	11	Flexible Cable (J206)	ADD1220
	12	Flexible Cable (J207)	ADD1221
	13	Flexible Cable (J208)	ADD1222
	14	Ferrite Core	ATX1048
	15	Flat Clamp	AEC1879
	16	PCB Spacer	AEC1941
	17	PCB Support	AEC1938
	18	PCB Spacer	AEC1944
	19	PCB Support	AEC1958
	20	Ferrite Clamp	AEC1972
	21	Wire Saddle	AEC1745
	22	PCB Spacer	AEC1947
	23	Wire Clip	AEC1948
	24	Drive Siricon Sheet	AEH1066
	25	Drive Siricon Sheet	AEH1065
	26	Ydrive Protect Sheet	AMR3346
	27	Screw	VBB30P080FNI
	28	Flexible Cable (J202)	ADD1227

2.3 CHASSIS SECTION (2)

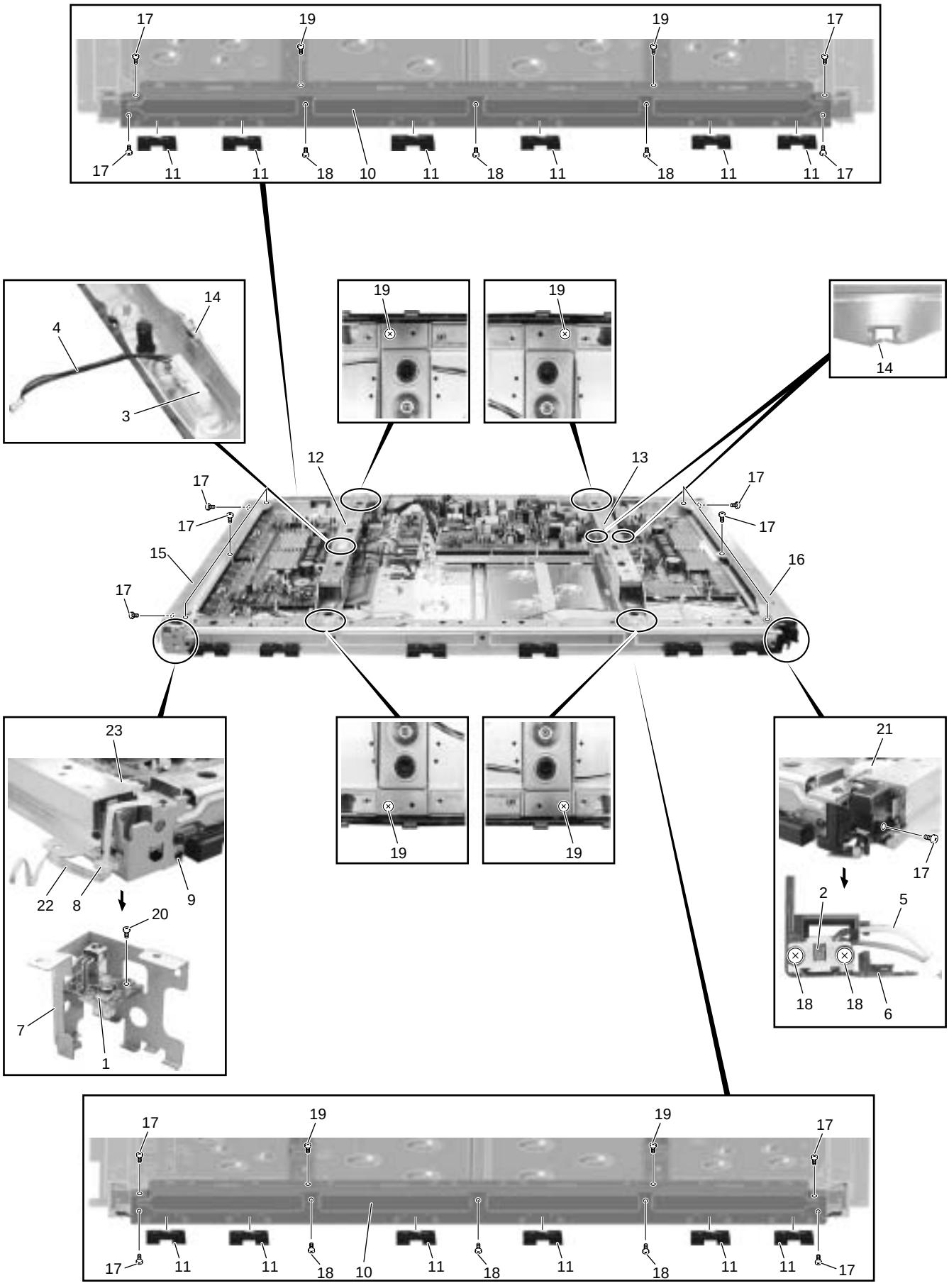




CHASSIS SECTION (2) Parts list

Mark	No.	Description	Part No.
	1	43 X DRIVE Assy	AWZ6794
	2	43 Y DRIVE Assy	AWV2022
⚠	3	POWER SUPPLY Unit	AXY1068
NSP	4	X CONNECTOR A Assy	AWZ6798
NSP	5	X CONNECTOR B Assy	AWZ6799
NSP	6	43 SCAN A Assy	AWZ6796
NSP	7	43 SCAN B Assy	AWZ6797
	8	KEY CONTROL Assy	AWZ6789
	9	PANEL SENSOR Assy	AWZ6795
	10	3P Housing Wire (J109)	ADX2847
	11	11P Housing Wire (J102)	ADX2840
	12	12P Housing Wire(J103)	ADX2841
	13	3P Housing Wire (J108)	ADX2846
	14	Wire B (J106)	ADX2844
	15	Screw	ABZ30P060FMC
	16	Screw	PMB30P060FNI
	17	Screw	VBB30P080FNI
	18	Screw	PMB40P080FZK
	19	Wire A (J101)	ADX2839
	20	Nyron Rivet	AEC1671

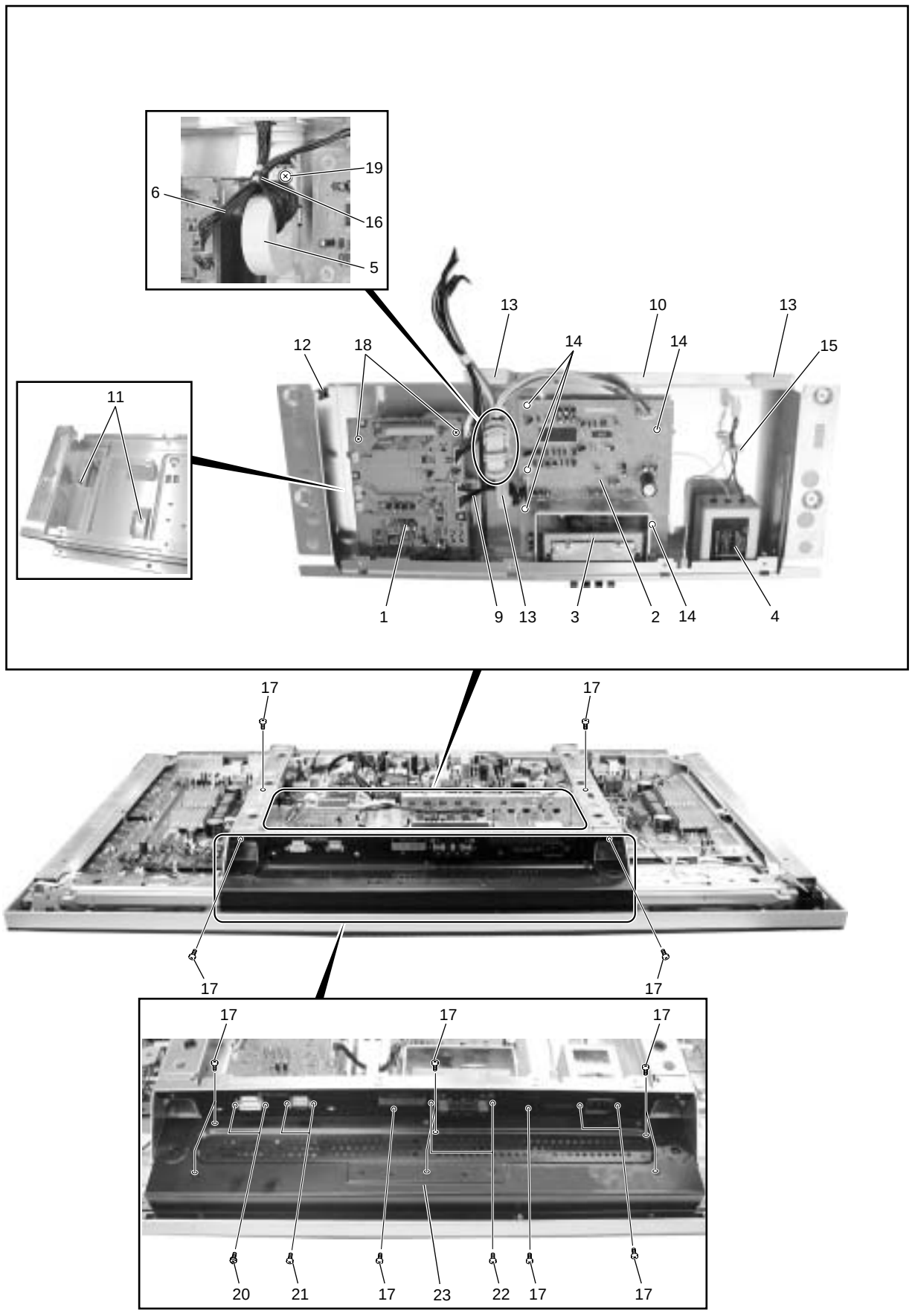
2.4 FLAME SECTION



FLAME SECTION Parts list

Mark	No.	Description	Part No.
	1	PANEL IR Assy	AWZ6790
⚠	2	Power Switch (S1)	ASG1092
	3	Power Switch (S2)	ASG1089
	4	3P Housing Wire (J107)	ADX2845
	5	Housing Wire (43) (J110)	ADX2848
	6	Switch Holder	AMR3349
NSP	7	IR Holder	ANG2551
	8	Wire Saddle	AEC1948
	9	Nyron Rivet	AEC1671
NSP	10	Front Chassis H (43)	ANA1714
	11	Front Spacer	AMR3369
	12	Sub Frame L Assy (43P)	ANG2545
	13	Sub Frame R Assy (43P)	ANG2548
	14	Edging Saddle	AEC1737
	15	Front Chassis VL Assy (43)	ANA1762
	16	Front Chassis VR Assy (43)	ANA1763
	17	Screw	AMZ30P060FZK
	18	Screw	APZ30P080FZK
	19	Screw	AMZ30P080FMC
	20	Screw	ABZ30P060FMC
	21	Flat Clamp	AEC1884
	22	Flexible Cable (J211)	ADD1225
	23	Flat Clamp	AEC1879

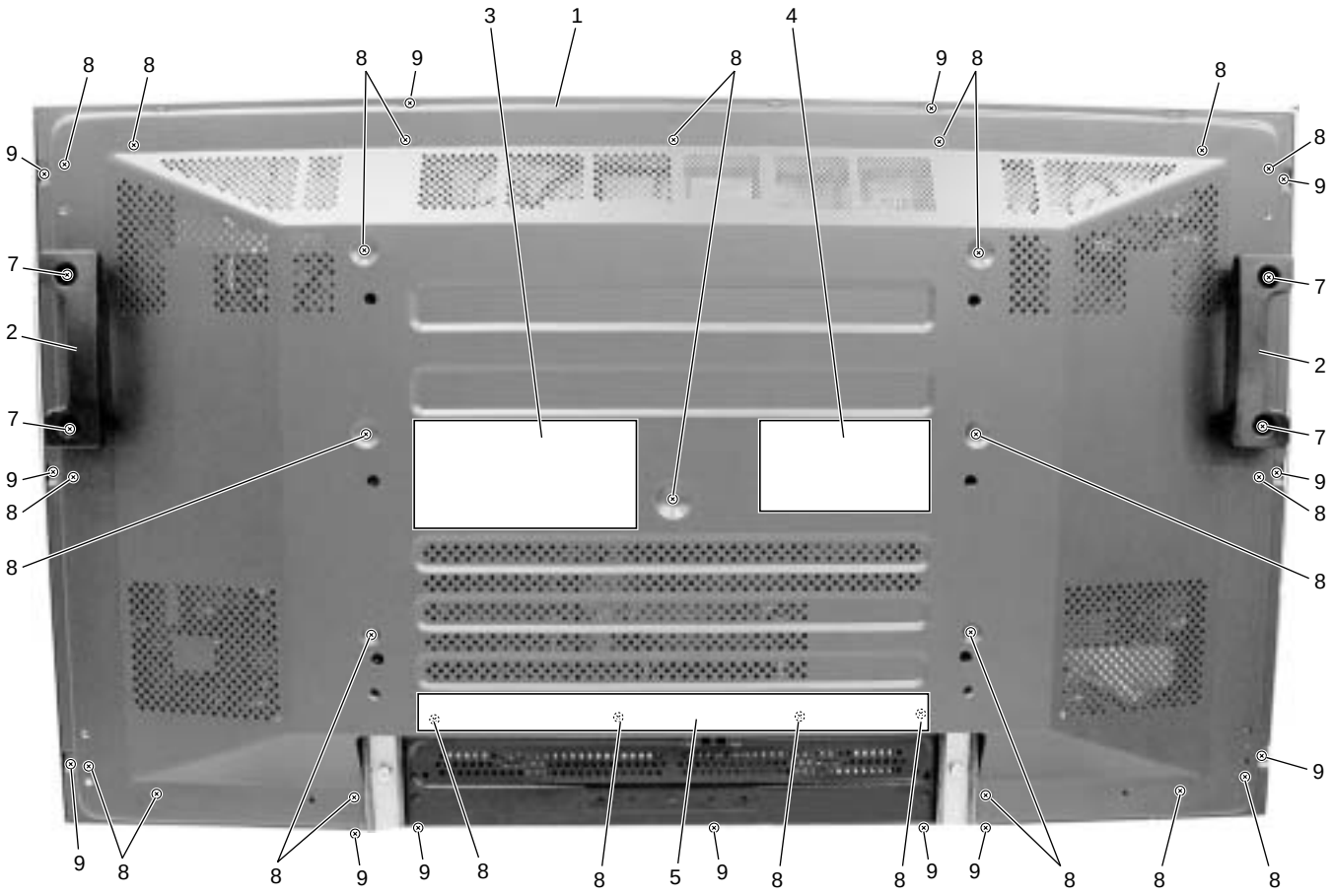
2.5 MULTI BASE SECTION



MULTI BASE SECTION Parts list

Mark	No.	Description	Part No.
	1	PANEL IF Assy	AWZ6786
	2	HD AUDIO AMP Assy	AWZ6834
	3	HD SP TERMINAL Assy	AWZ6792
⚠	4	AC Inlet	AKP1244
	5	Toroidal Core	ATX1042
	6	Wire C (J104)	ADX2879
	7	• • • • •	
	8	• • • • •	
	9	13P Housing Wire (J105)	ADX2843
	10	Multi Base Assy (P)	ANA1718
	11	Locking Card Spacer	AEC1940
	12	Edge Saddle	AEC1946
	13	Clamp	AEC1884
	14	PCB Spacer	AEC1941
	15	Niplocker	BEC1136
	16	Nyron Binder	AEC-093
	17	Screw	AMZ30P060FZK
	18	Screw	PMB30P060FNI
	19	Screw	ABA1294
	20	Hexagon Head Screw	BBA1051
	21	Screw	PMZ26P060FZK
	22	Screw	APZ30P080FZK
	23	Under Cover Assy	ANG2589

2.6 REAR SECTION



REAR SECTION Parts list

Mark	No.	Description	Part No.
	1	Rear Case (43p)	ANE1612
	2	Grip	AMR3380
NSP	3	Name Label	See Contrast table (2)
	4	Caution Label	See Contrast table (2)
	5	Terminal Label	See Contrast table (2)
	6	•••••	

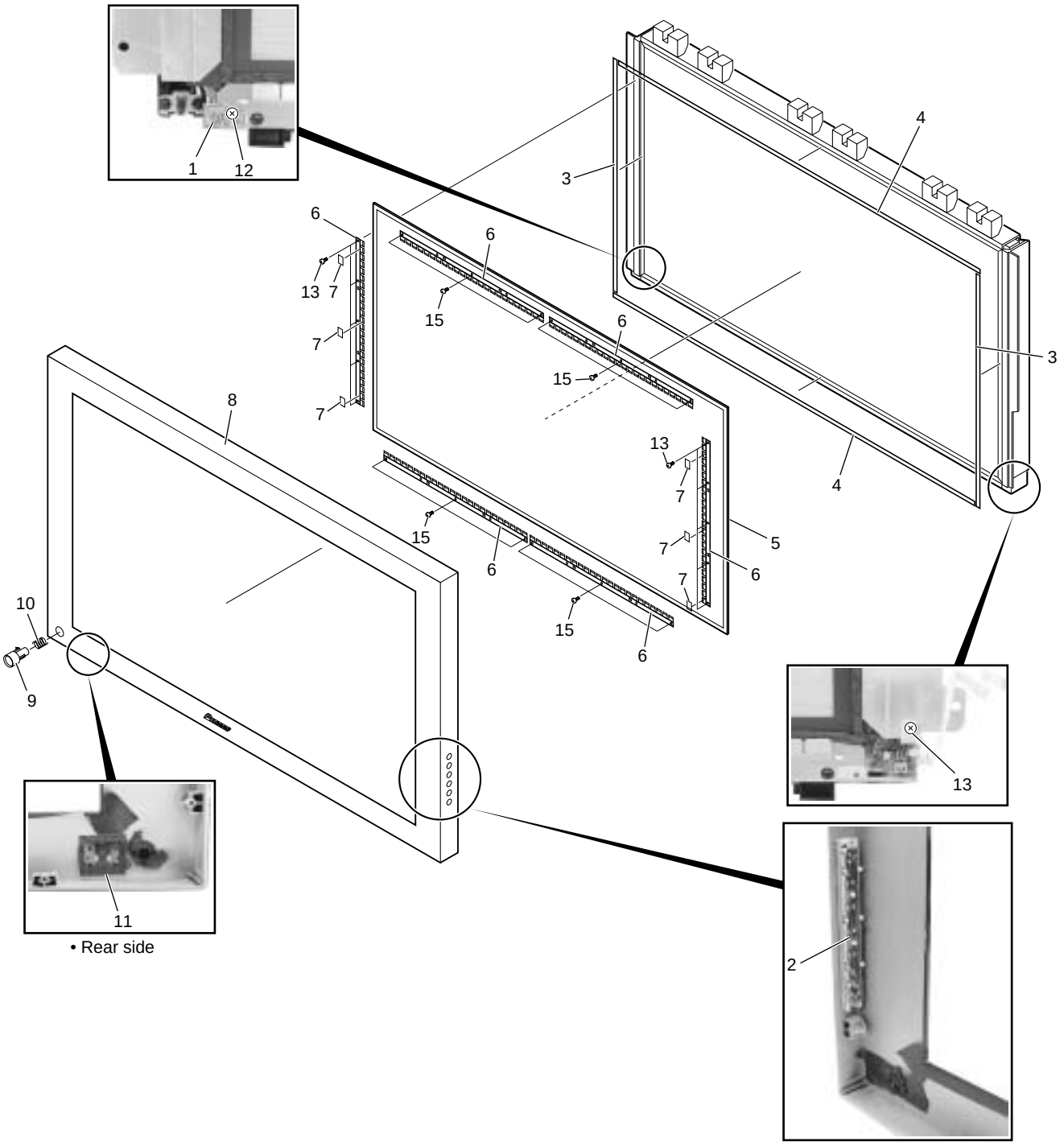
Mark	No.	Description	Part No.
	7	Screw	PMB50P120FZK
	8	Screw	AMZ30P060FZK
	9	Screw	ABZ30P100FZK

(2) CONTRAST TABLE

PDP-434PU/ TUCK, PDP-434PE/ WYVI6, PDP-434PE/ WYVI6XK and PRO-434PU/ KUC are constructed the same except for the following :

Mark	No.	Symbol and Description	PDP-434PU TUCK	PDP-434PE WYVI6	PDP-434PE WYVI6XK	PRO-434PU KUC
NSP	3	Name Label	AAL2467	AAL2471	AAL2480	AAL2482
	4	Caution Label	AAX3007	AAX3007	AAX3005	AAX3007
	5	Terminal Label	AAX2997	AAX2998	AAX3006	AAX2997

2.7 FRONT PANEL SECTION



• Rear side

FRONT PANEL SECTION Parts list

Mark	No.	Description	Part No.
	1	PANEL LED Assy	AWZ6787
	2	PANEL KEY Assy	AWZ6788
	3	Panel Cushion V (43)	AED1201
	4	Panel Cushion H (43)	AED1200
	5	Protect Panel Assy 43	See Contrast table (2)
NSP	6	Panel Holder (43)	ANG2552
	7	Cushion	AEB1393
	8	Front Case Assy	See Contrast table (2)
	9	Power Button	See Contrast table (2)
	10	Coil Spring	ABH1114
	11	Blind Cushion	AEB1383
	12	Screw	BBZ30P050FMC
	13	Screw	ABZ30P060FMC
	14	Serial Sheet	AAX2609
	15	Screw	APZ30P080FZK

(2) CONTRAST TABLE

PDP-434PU/ TUCK, PDP-434PE/ WYVI6, PDP-434PE/ WYVI6XK and PRO-434PU/ KUC are constructed the same except for the following :

Mark	No.	Symbol and Description	PDP-434PU TUCK	PDP-434PE WYVI6	PDP-434PE WYVI6XK	PRO-434PU KUC
	5	Protect Panel Assy (43)	AMR3383	AMR3345	AMR3345	AMR3345
	8	Front Case Assy	AMB2779	AMB2779	AMB2779	AMB2783
	9	Power Button	AAD4123	AAD4123	AAD4123	AAD4126

2.8 PDP SERVICE Assy (AWU1079)

PDP SERVICE Assy (AWU1079) Parts list

Mark	No.	Description	Part No.
NSP		1..P. Chassis (43) Assy	AWU1070
NSP		2..Front Chassis H (43)	ANA1714
		2..Front Chassis VL (43)	ANA1762
		2..Front Chassis VR (43)	ANA1763
		2..Sub Frame L Assy	ANG2545
		2..Sub Frame R Assy	ANG2548
		2..Wire Saddle	AEC1745
		2..Clamp	AEC1884
		2..PCB Support	AEC1938
		2..PCB Spacer	AEC1941
		2..PCB Spacer	AEC1947
		2..Wire Clip	AEC1948
		2..Ferrite Clamp (Plastic)	AEC1972
		2..Panel Cushion H (43)	AED1200
		2..Panel Cushion V (43)	AED1201
		2..Ydrive Protect Sheet	AMR3346
		2..Front Spacer	AMR3369
		2..Caution Label	AAX3031
		2..Spacer	AEB1397
		2..Edging Saddle	AEC1737
NSP		2..Drive Voltage Label	ARW1097
		2..Front Case (434 Service)	AMB2810 (Note)
		2..Rear Case (43P)	ANE1612 (Note)

Note: The front case (434 Service) and rear case (434p) attached to the Service Assy are for transportation only.
Do NOT use them as parts of the unit.

		2..Screw	AMZ30P060FZK
		2..Screw	AMZ30P080FMC
		2..Screw	AMZ30P080FZK
		2..Screw	PMB30P060FNI
		2..Screw	VBB30P080FNI
		2..Screw	ABZ30P100FZK

2.9 PANEL CHASSIS (43) Assy (AWU1070)

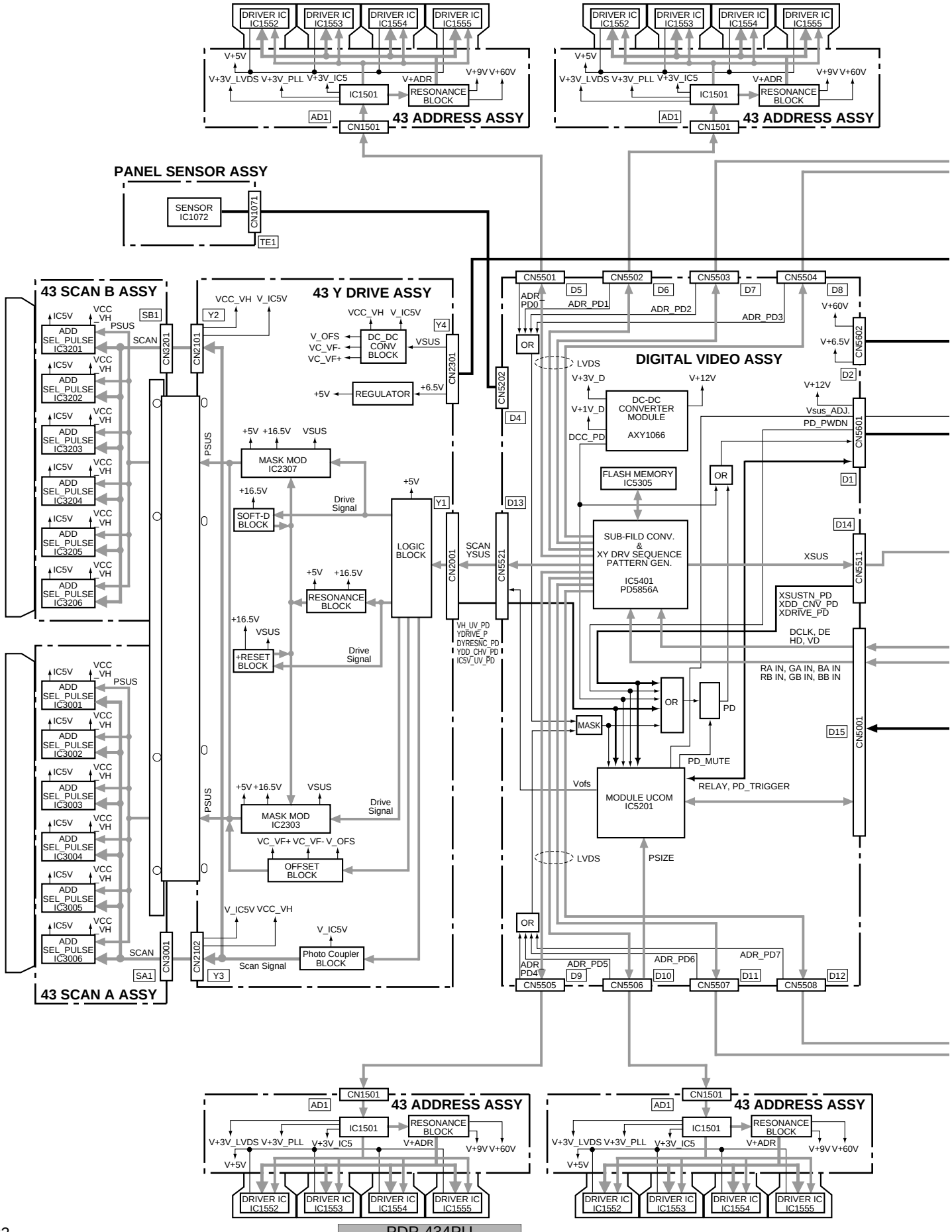
PANEL CHASSIS (43) Assy (AWU1070) Parts list

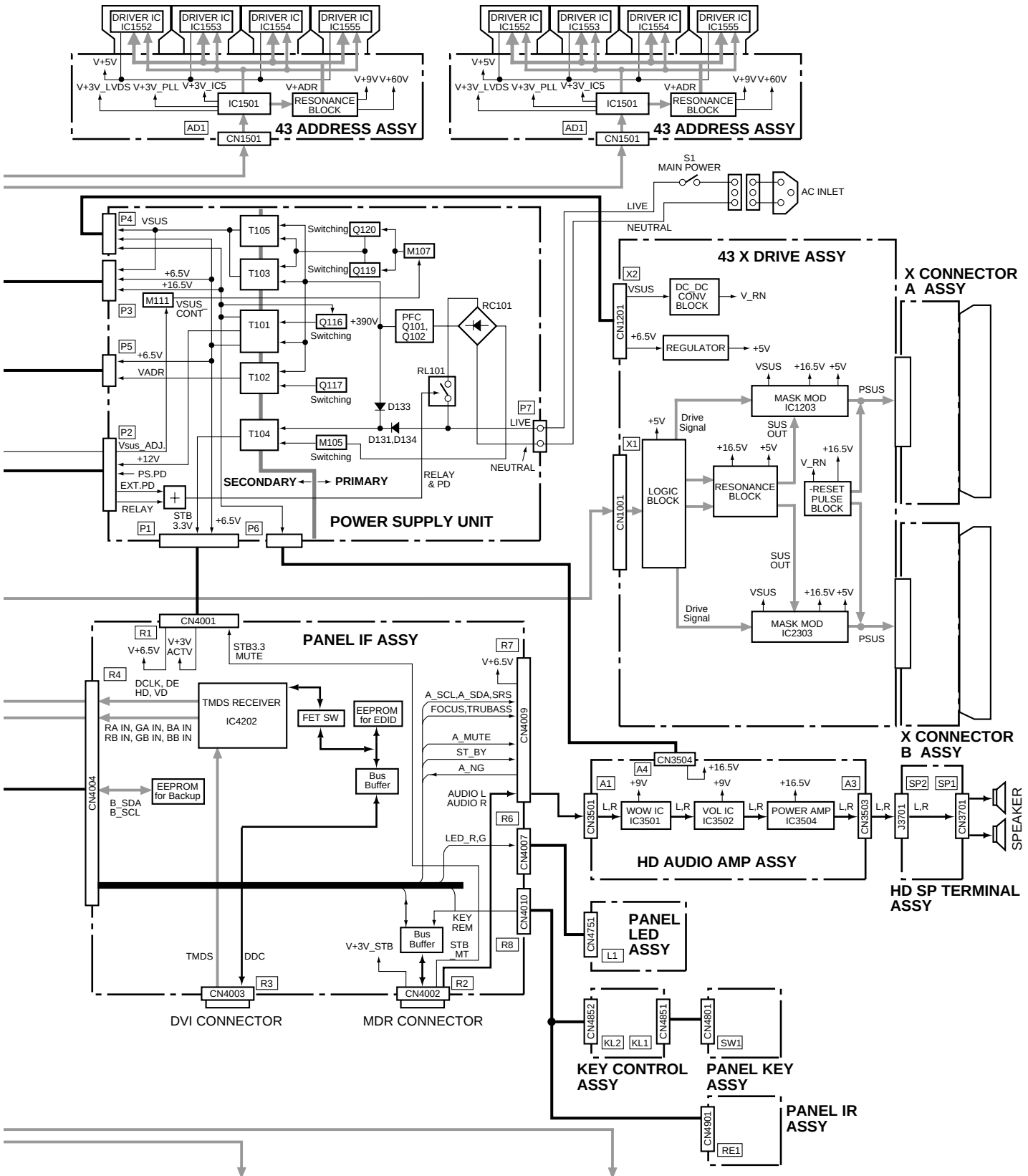
Mark	No.	Description	Part No.
NSP		1..43 ADDRESS Assy	AWV2020
NSP		2..43 ADDRESS Assy	AWZ6793
NSP		1..43 SCAN FUKUGO Assy	AWV2023
NSP		2..43 SCAN A Assy	AWZ6796
NSP		2..43 SCAN B Assy	AWZ6797
NSP		2..X CONNECTOR A Assy	AWZ6798
NSP		2..X CONNECTOR B Assy	AWZ6799
NSP		1..Address Module (IC1-IC32)	AXF1115
NSP		1..Plasma Panel Assy (43")(V1)	AAV1243
NSP		1..FPC (43XGA-X)	ADY1079
NSP		1..FPC (43XGA-Y)	ADY1080
NSP		1..Chassis Assy (43)	ANA1733
		1..PCB Spacer	AEC1944
		1..PCB Support	AEC1958
		1..Rivet (Plastic)	AMR1066
		1..FC Spacer	AMR3370
		1..Adhesive	ZBA-KE3424G
NSP		1..Lotion	ZLX-AP7
NSP		1..Tape	ZTA-8101-12
NSP		1..Double Faced Tape	ZTB-5015-18
NSP		1..Tape	ZTC-POLYCA-11
NSP		1..Tape	ZTC-POLYCA-20
NSP		1..Tape	ZTC-900UL-15
NSP		1..Silicone Rubber	ZTX-HC20-15
NSP		1..Wiping Cloth	ZTX-MX100-13
NSP		1..Film	ZTX-2102Y35-2R5
NSP		1..Film	ZTX-2102Y45-5

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

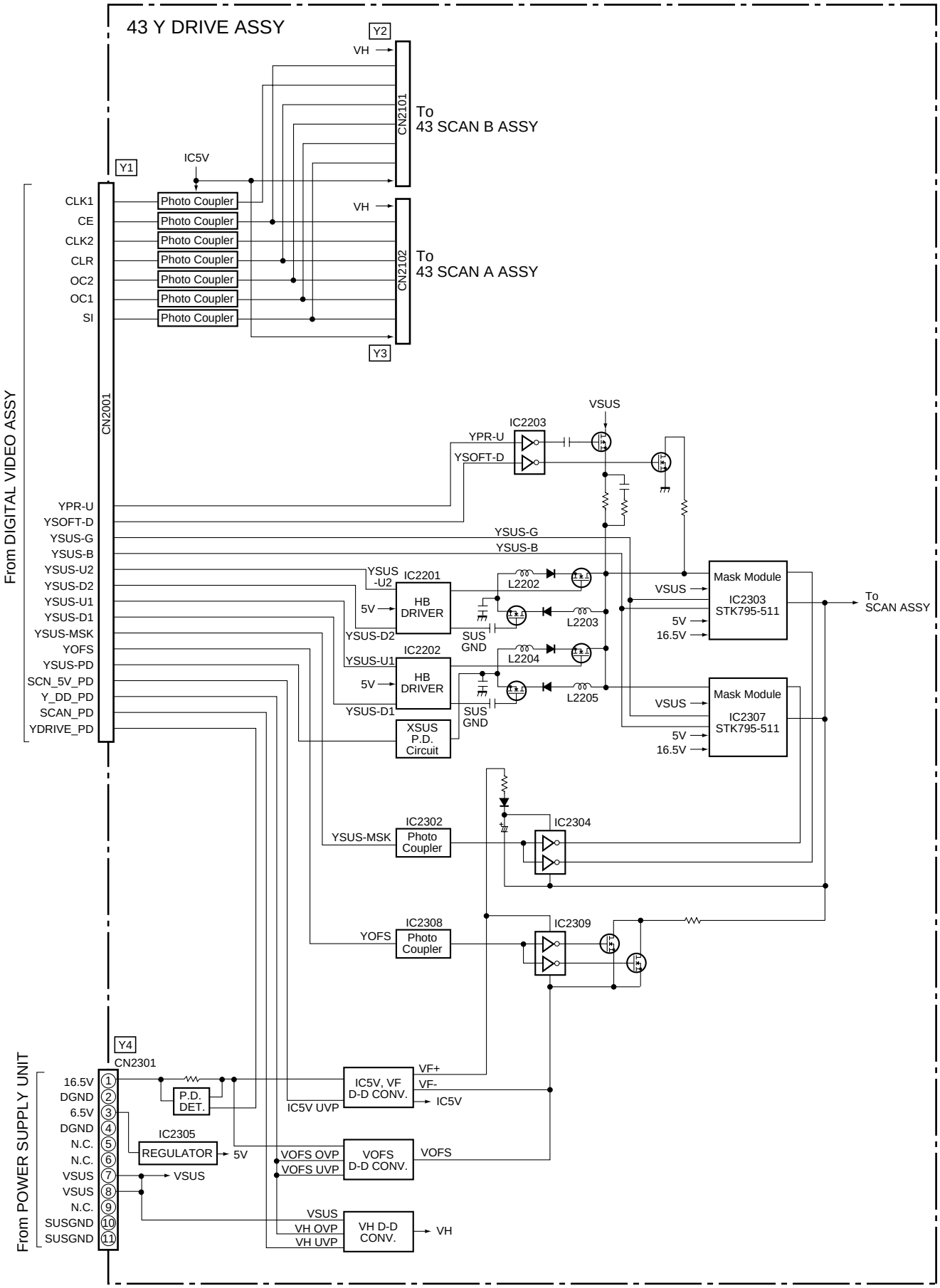
3.1.1 OVERALL BLOCK DIAGRAM




DRIVER IC IC1552
DRIVER IC IC1553
DRIVER IC IC1554
DRIVER IC IC1555
V+5V
V+3V_LVDS V+3V_PLL V+3V_IC5
V+ADR
V+9V V+60V
IC1501
RESONANCE BLOCK
AD1
CN1501
43 ADDRESS ASSY
S1
MAIN POWER
AC INLET
LIVE
NEUTRAL
P4 VSUS
T105
Switching Q120
M107
T103
Switching Q119
+6.5V
+16.5V
M111
VSUS_CONT
P3
T101
Q116 +390V
Switching
PFC Q101, Q102
RC101
P5 +6.5V
VADR
T102
Q117
Switching
RL101
D133
P7
LIVE
P2 Vsus_ADJ.
+12V
PS.PD
EXT.PD
RELAY
T104
M105
Switching
D131,D134
NEUTRAL
SECONDARY
PRIMARY
RELAY & PD
STB 3.3V
+6.5V
P1
P6
POWER SUPPLY UNIT
43 X DRIVE ASSY
X2
CN1201
VSUS
DC_DC CONV BLOCK
V_RN
+6.5V
REGULATOR
+5V
X CONNECTOR A ASSY
VSUS +16.5V +5V
MASK MOD IC1203
PSUS
SUS OUT
Drive Signal
+5V
X1
CN1001
LOGIC BLOCK
+16.5V +5V
RESONANCE BLOCK
V_RN
-RESET PULSE BLOCK
+16.5V
SUS OUT
VSUS +16.5V +5V
Drive Signal
MASK MOD IC2303
PSUS
X CONNECTOR B ASSY
CN4001
PANEL IF ASSY
R1
V+6.5V
V+3V ACTV
STB3.3 MUTE
R7
V+6.5V
R4
DCLK, DE
HD, VD
TMDS RECEIVER IC4202
FET SW
EEPROM for EDID
A_SCL,A_SDA,SRS
FOCUS,TRUBASS
A_MUTE
ST_BY
A_NG
CN4009
RA IN, GA IN, BA IN
RB IN, GB IN, BB IN
Bus Buffer
CN4004
EEPROM for Backup
B_SDA
B_SCL
AUDIO L
AUDIO R
R6
LED_R,G
CN4007
CN4010
KEY REM
STB_MT
Bus Buffer
V+3V_STB
R8
TMDS
DDC
CN4003
R3
CN4002
R2
DVI CONNECTOR
MDR CONNECTOR
CN3504
A4
+16.5V
A1
+9V
WOW IC IC3501
+9V
VOL IC IC3502
+16.5V
POWER AMP IC3504
A3
CN3501
CN3503
L,R
J3701
SP2
SP1
CN3701
SPEAKER
HD AUDIO AMP ASSY
HD SP TERMINAL ASSY
CN4751
PANEL LED ASSY
L1
CN4852
KL2
KL1
CN4851
CN4801
SW1
KEY CONTROL ASSY
PANEL KEY ASSY
CN4901
RE1
PANEL IR ASSY

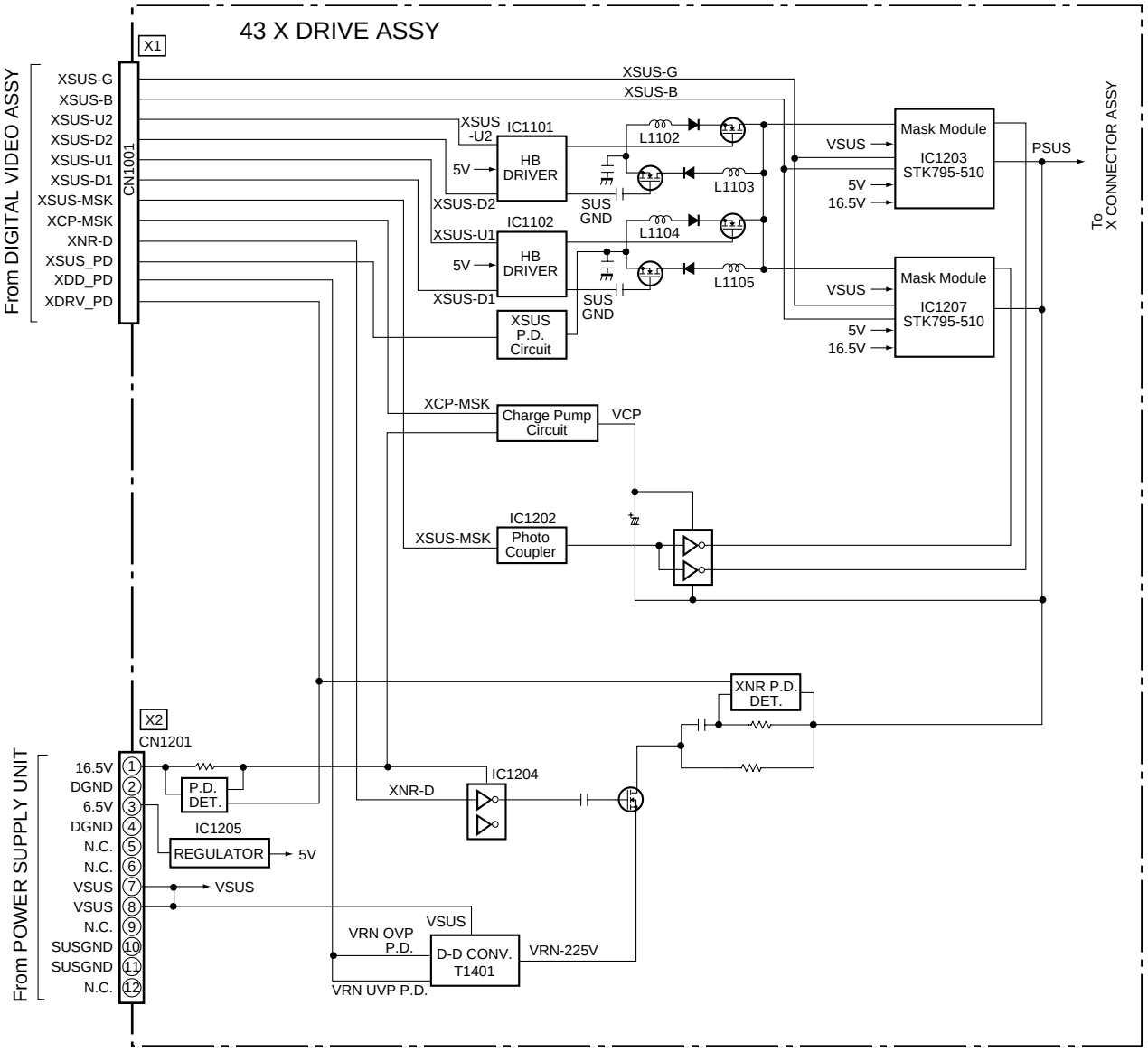
3.1.2 43 Y DRIVE ASSY

• Block Diagram



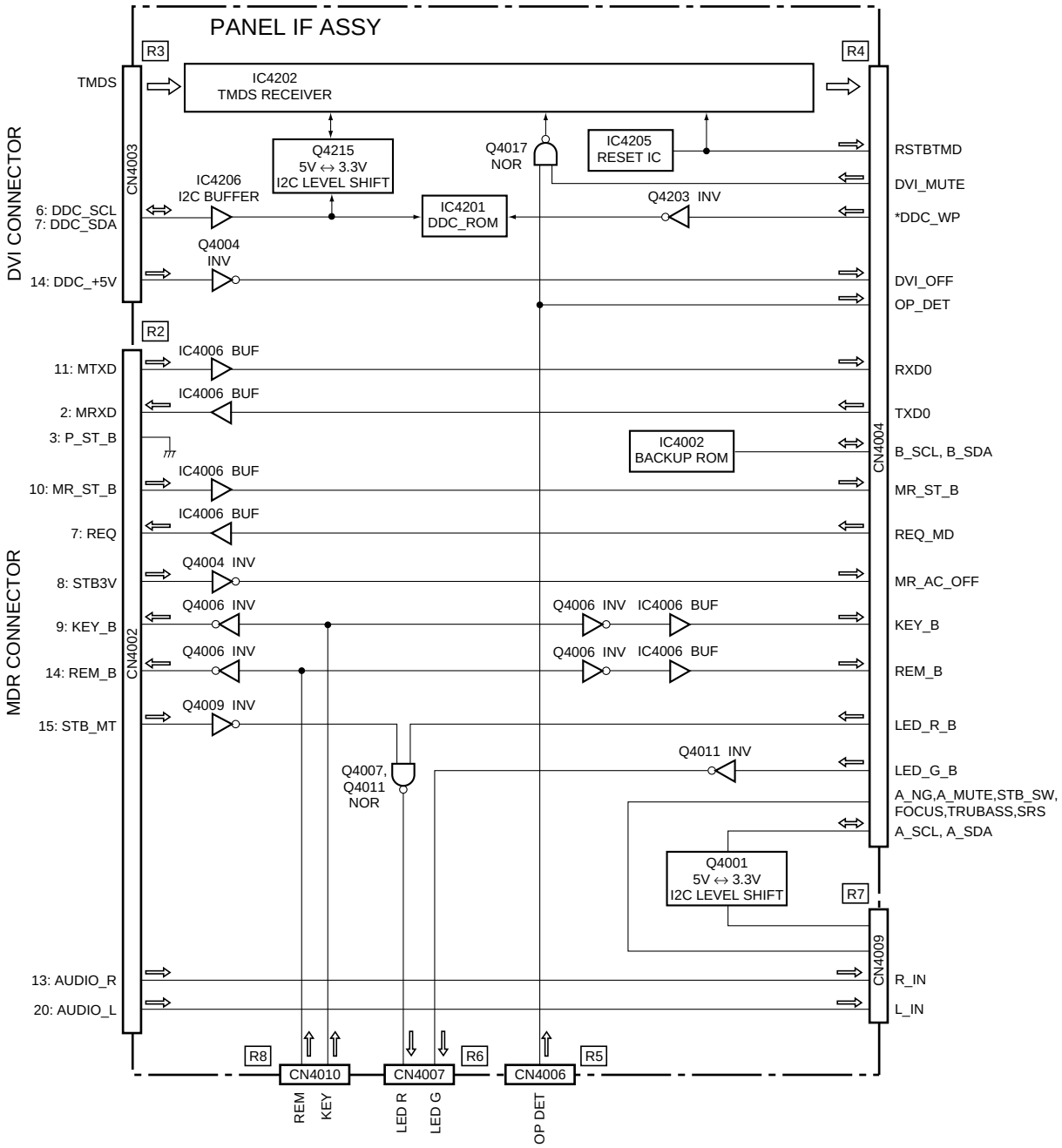
3.1.3 43 X DRIVE ASSY

• Block Diagram



3.1.4 PANEL IF ASSY

• Block Diagram



• Voltages

CN4001 (R1) < ⇔ POWER SUPPLY UNIT >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	6.5V	I	+6.5V power supply	+6.8VDC
2	6.5V	I	+6.5V power supply	+6.8VDC
3	Vcc_GND	–	GND	
4	Vcc_GND	–	GND	
5	STB3.3V	I	Power supply +3.3V input of module UCOM at panel side	+3.3VDC
6	STB_GND	–	GND	
7	STB3.3MUTE	O	Standby control (+3.3V mute)	+6.7VDC
8	AC_DET	I	Primary power supply (AC) state input at panel side	+3.0VDC

CN4002 (R2) < ⇔ MEDIA RECEIVER >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	MR_ST_B	I	Connection state detecting signal with MDR	0VDC
2	MRXD	O	UART communication transmission data with the main UCOM (external PC) at MDR side	0-3.3V amplitude square wave
3	P_ST_B	O	Connection state output for the MDR	0VDC
4	ACT3V	O	Power supply +3.3V output of module UCOM at panel side	+3.3VDC
5	AC_OFF	O	Primary power supply (AC) state output at panel side	0VDC
6	GND	–	GND	
7	REQ	O	Communication request to the main UCOM (external PC) at the MDR	0-3.3V amplitude square wave
8	STB3V	I	Standby power supply (+3.3V) input from the MDR	+3.3VDC
9	KEY_B	O	Function key code signal output at panel side	0-3.3V amplitude square wave (at key operation)
10	MR_ST_B'	I	Connection state detecting signal with the MDR	0VDC
11	MTXD	I	UART communication receive data with the main UCOM (external PC) at the MDR side	0-3.3V amplitude square wave
12	GND	–	GND	
13	AUDIO_R	I	R ch audio signal input	Audio R signal
14	REM_B	O	Remote control code signal output	0-3.3V amplitude square wave (at remocon code transmission)
15	STB_MT	I	Standby control input	0VDC
16	GND	–	GND	
17	NC	–	Not connected	–
18	FIELD	I	FIELD control signal	0VDC
19	GND	–	GND	
20	AUDIO_L	I	L ch audio signal input	Audio L signal

CN4003 (R3) < ⇔ MEDIA RECEIVER >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	RX2-	I	DVI signal	DVI differential signal (-)
2	RX2+	I	DVI signal	DVI differential signal (+)
3	GND	–	GND	
4	N.C	–	Not connected	–
5	N.C	–	Not connected	–
6	DDC_SCL	I	I2C signal for DDC	0-5V amplitude square wave
7	DDC_SDA	I	I2C signal for DDC	0-5V amplitude square wave
8	N.C	–	Not connected	–
9	RX1-	I	DVI signal	DVI differential signal (-)
10	RX1+	I	DVI signal	DVI differential signal (+)
11	GND	–	GND	
12	N.C	–	Not connected	–
13	N.C	–	Not connected	–
14	DDC_+5V	I	I2C power supply for DDC	+5VDC
15	GND	–	GND	
16	HPD	O	Hot plug detection	+5VDC
17	RX0-	I	DVI signal	DVI differential signal (-)
18	RX0+	I	DVI signal	DVI differential signal (+)
19	GND	–	GND	
20	N.C	–	Not connected	–
21	N.C	–	Not connected	–

• Voltages

CN4003 (R3) < ⇔ MEDIA RECEIVER >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
22	GND	–	GND	
23	RXC+	I	DVI signal	DVI differential signal (-)
24	RXC-	I	DVI signal	DVI differential signal (+)

CN4006 (R5) < ⇔ TRAP SW >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	OP_DET	I	Rear panel open detecting signal	0VDC
2	N.C	–	Not connected	–
3	GND	–	GND	

CN4007 (R6) < ⇔ PANEL LED ASSY >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	LED_G	O	LED control (green)	+2.1VDC
2	LED_R	O	LED control (red)	0VDC
3	AC_OFF	O	Primary power supply (AC) state output at the panel side	0VDC

CN4009 (R7) < ⇔ HD AUDIO AMP ASSY >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	A_NG	I	Abnormal detecting signal of the audio block	+3.3V DC
2	V+6.5	O	+6.5V power supply	+6.8V DC
3	GNDA	–	GND	
4	L_IN	O	L ch audio signal	Audio L signal
5	GNDA	–	GND	
6	R_IN	O	R ch audio signal	Audio R signal
7	ST_BY	O	Standby signal of the audio block	+3.3V DC
8	A_MUTE	O	Audio mute signal input	0V DC
9	SCL	O	I2C control signal for audio	0-3.3V amplitude square wave
10	SDA	O	I2C control signal for audio	0-3.3V amplitude square wave
11	FOCUS	O	Focus function control signal	+3.3V DC
12	SRS	O	SRS function control signal	+3.3V DC
13	TRUBASS	O	TRUBASS function control signal	+3.3V DC

CN4010 (R8) < ⇔ PANEL IR ASSY, KEY CONTROL ASSY >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	STB3V	O	+3.3V power supply	+3.3V DC
2	STBGND	–	GND	
3	REM	I	Remote control code signal input	0-3.3V amplitude square wave (at remocon code transmission)
4	STB+3V	O	+3.3V power supply	+3.3V DC
5	KEY	I	Function key code signal input at the panel side	0-3.3V amplitude square wave (at key operation)
6	STBGND	–	GND	

CN4801 (SW1) < ⇔ KEY CONTROL ASSY >

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	STBGND	–	GND	0V DC
2	G1	O	Key scan signal	0V DC
3	G0	O	Key scan signal	0V DC
4	D5	I	Key scan signal	+3.3V DC
5	D6	I	Key scan signal	+3.3V DC
6	D7	I	Key scan signal	+3.3V DC

• Voltages

CN4004 (R4) < ⇔ DIGITAL VIDEO ASSY > (1/2)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	GND	–	GND	
2	GND	–	GND	
3			Not connected	–
4			Not connected	–
5	BA0	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
6	BA1	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
7	BA2	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
8	BA3	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
9	BA4	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
10	BA5	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
11	BA6	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
12	BA7	O	8bit video signal output (BLUE even number)	0-3.3V amplitude square wave
13	GND	–	GND	
14	GND	–	GND	
15			Not connected	–
16			Not connected	–
17	GA0	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
18	GA1	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
19	GA2	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
20	GA3	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
21	GA4	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
22	GA5	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
23	GA6	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
24	GA7	O	8bit video signal output (GREEN even number)	0-3.3V amplitude square wave
25	GND	–	GND	
26	GND	–	GND	
27			Not connected	–
28			Not connected	–
29	RA0	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
30	RA1	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
31	RA2	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
32	RA3	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
33	RA4	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
34	RA5	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
35	RA6	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
36	RA7	O	8bit video signal output (RED even number)	0-3.3V amplitude square wave
37	GND\	–	GND	
38	DCLK	O	Synchronous signal output (clock)	0-3.3V amplitude square wave (42.5MHz)
39	GND	–	GND	
40	DEI	O	Synchronous signal output (data enable)	0-3.3V amplitude square wave (positive polarity)
41	HDI	O	Synchronous signal output (Horizontal sync.)	0-3.3V amplitude square wave (negative polarity)
42	VDI	O	Synchronous signal output (Vertical sync.)	0-3.3V amplitude square wave (negative polarity)
43	FIELD	O	FIELD control signal	0V DC
44	APL_DT		Not connected	–
45			Not connected	–
46			Not connected	–
47	BB0	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
48	BB1	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
49	BB2	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
50	BB3	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
51	BB4	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
52	BB5	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
53	BB6	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
54	BB7	O	8bit video signal output (BLUE odd number)	0-3.3V amplitude square wave
55	GND	–	GND	
56	GND	–	GND	
57			Not connected	–
58			Not connected	–

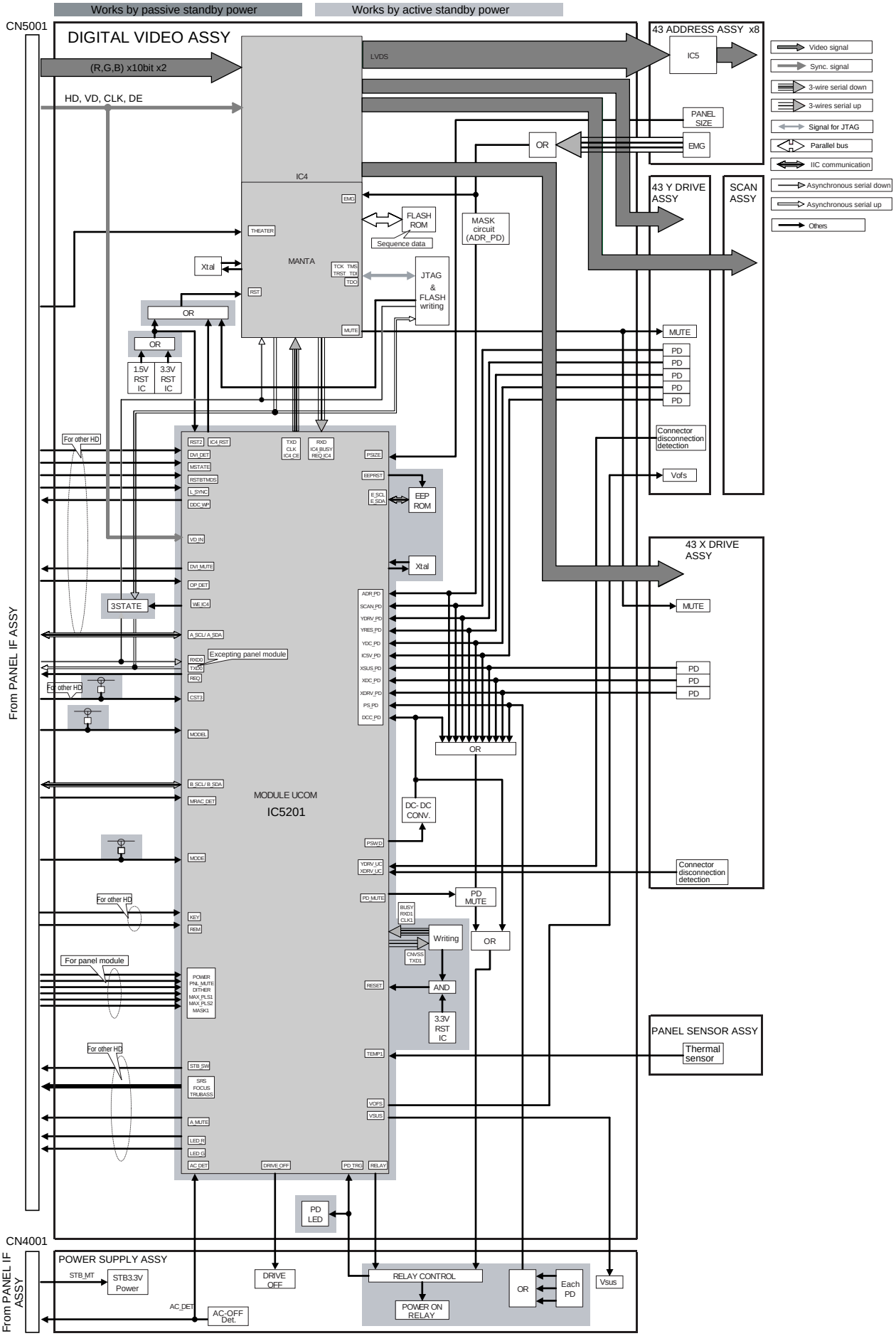
• Voltages

CN4004 (R4) < ⇔ DIGITAL VIDEO ASSY > (2/2)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
59	GB0	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
60	GB1	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
61	GB2	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
62	GB3	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
63	GB4	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
64	GB5	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
65	GB6	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
66	GB7	O	8bit video signal output (GREEN odd number)	0-3.3V amplitude square wave
67	GND	–	GND	
68	GND	–	GND	
69			Not connected	–
70			Not connected	–
71	RB0	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
72	RB1	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
73	RB2	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
74	RB3	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
75	RB4	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
76	RB5	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
77	RB6	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
78	RB7	O	8bit video signal output (RED odd number)	0-3.3V amplitude square wave
79	GND	–	GND	
80	MASK		Not connected	–
81	MODE		Not connected	–
82	MODEL		Not connected	–
83	DITHER		Not connected	–
84	V+3VACTV	O	Power supply +3.3V output of module UCOM at panel side	+3.3VDC
85	B_SDA	I	E2PROM control signal for backup	0-3.3V amplitude square wave
86	RXD0	O	UART communication receive data with the main UCOM (external PC) at MDR side	0-3.3V amplitude square wave
87	REM_B	O	Remote control code signal output	0-3.3V amplitude square wave (at remocon code transmission)
88	TXD0	I	UART communication transmission data with the main UCOM (external PC) at MDR side	0-3.3V amplitude square wave
89	KEY_B	O	Function key code signal output at panel side	0-3.3V amplitude square wave (at key operation)
90	REQ_MD	I	Communication request to the main UCOM (external PC) at MDR side	0-3.3V amplitude square wave
91	LED_R_B	I	LED control (red)	+3.3VDC
92	MR_AC_OFF	O	AC state output at MR side	0VDC
93	LED_G_B	I	LED control (green)	0VDC
94	POWER		Not connected	–
95	DVI_MUTE	I	DVI mute signal input	0VDC
96	MR_ST_B	O	Connection state detecting signal with MDR	0VDC
97	A_MUTE	I	Audio mute signal input	0VDC
98	OP_DET	O	Rear case open detecting signal	0VDC
99	A_NG	O	Abnormal detecting signal of audio block	+3.3VDC
100	PNL_MUTE		Not connected	–
101	A_SCL	I	I2C control signal for audio	0-3.3V amplitude square wave
102	STB_SW	I	Standby signal of audio block	+3.3VDC
103	A_SDA	I	I2C control signal for audio	0-3.3V amplitude square wave
104	DDC_WP	I	EDID E2PROM writing inhibit signal	0VDC
105	TRUBASS	I	TRUBASS function control signal	+3.3VDC
106	B_SCL	I	E2PROM control signal for backup	0-3.3V amplitude square wave
107	FOCUS	I	FOCUS function control signal	+3.3VDC
108	DVI_OFF	O	Connection detecting signal of DVI connector	0VDC
109	SRS	I	SRS function control signal	+3.3VDC
110	RSTBTMD	O	TMDS IC reset signal	+3.3VDC
111	MAX_PLS1		Not connected	–
112	L_SYNC	O	TMDS IC synchronous detecting signal	+3.3VDC
113	MAX_PLS2		Not connected	–
114	GND	–		

3.1.5 DIGITAL VIDEO ASSY

• Block Diagram



• Voltages

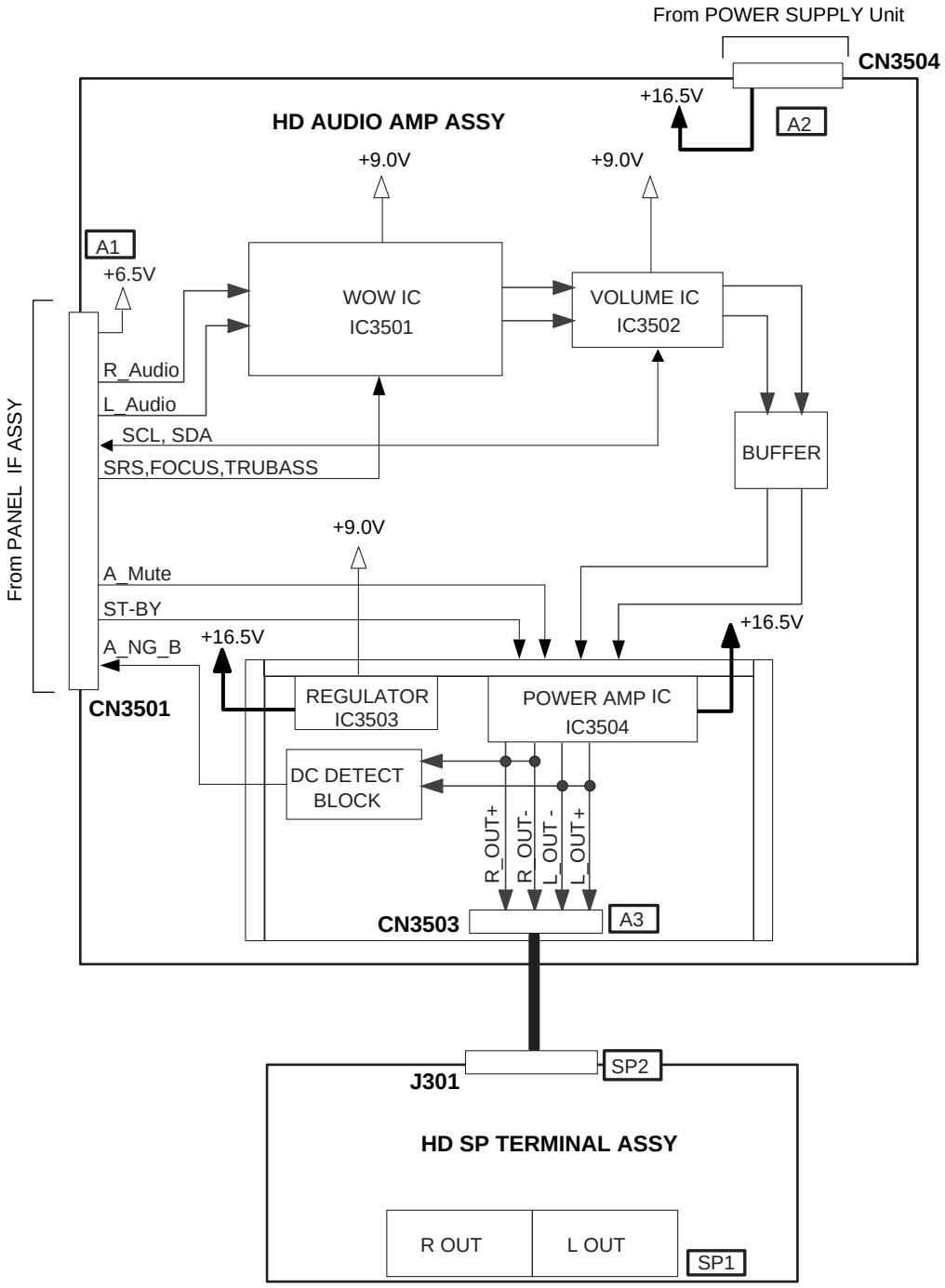
CN5601 (D1)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	+12V	I	+12V power input	+12VDC
2	+12V	I	+12V power input	+12VDC
3	GND_D	–	GND	
4	GND_D	–	GND	
5	PD	O	Power down signal	0VDC
6	VSUS_ADJ	O	VSUS adjustment signal	
7	PS_PD	I	Power-down detecting signal of POWER SUPPLY block	0VDC
8	RELAY	O	Relay control signal	+3.3VDC
9	DRF	O	Drive control signal	0VDC
10	AC_DET	I	Primary side power (AC) state output at panel side	+3.0VDC
11	PD_TRIGGER	I	Power down trigger	+3.3VDC

CN5602 (D2)

No.	Signal Name	I/O	Signal Description	Voltages at NTSC Signal Input
1	VADR	I	Address drive power (+61V) input	+61VDC
2	VADR	I	Address drive power (+61V) input	+61VDC
3	N.C		Not connected	
4	GND_ADR	–	GND	
5	GND_ADR	–	GND	
6	+6.5V	I	+6.5V power input	+6.8VDC
7	GND_D	–	GND	

3.1.6 HD AUDIO AMP ASSY

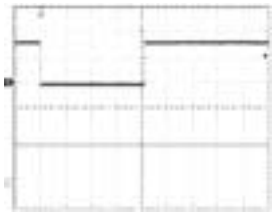


3.2 WAVEFORMS

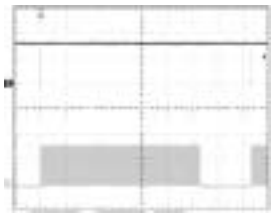
DIGITAL VIDEO ASSY

① CH1: K5003 (VD)
CH2: K5002 (HD)
V: 2V/div. H: 2msec/div.

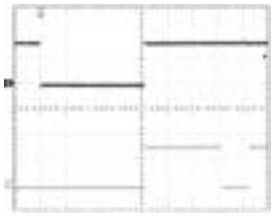
① CH1: K5003 (VD)
CH2: K5002 (HD)
V: 2V/div. H: 4µsec/div.



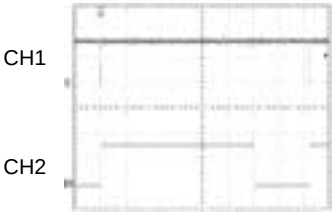
② CH1: K5003 (VD)
CH2: K5004 (DE)
V: 2V/div. H: 2msec/div.



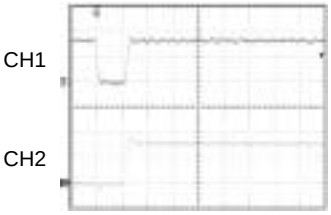
② CH1: K5003 (VD)
CH2: K5004 (DE)
V: 2V/div. H: 4µsec/div.



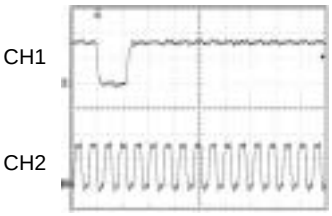
③ CH1: K5002 (HD)
CH2: K5004 (DE)
V: 2V/div. H: 2µsec/div.



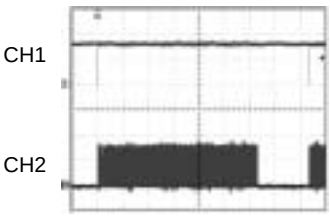
③ CH1: K5002 (HD)
CH2: K5004 (DE)
V: 2V/div. H: 40nsec/div.



④ CH1: K5002 (HD)
CH2: CN5001-pin 77 (DCLK)
V: 2V/div. H: 40nsec/div.

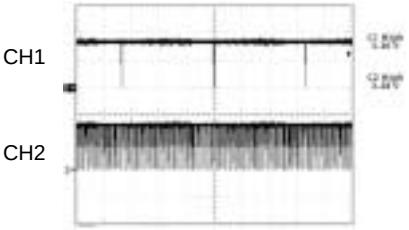


⑤ CH1: K5003 (VD)
CH2: CN5001-pin 88 (RA_IN2)
V: 2V/div. H: 2msec/div.

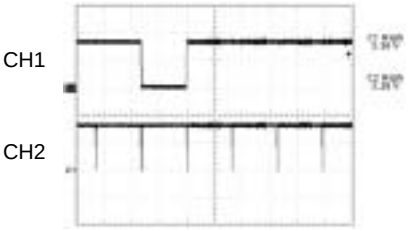


PANEL IF ASSY

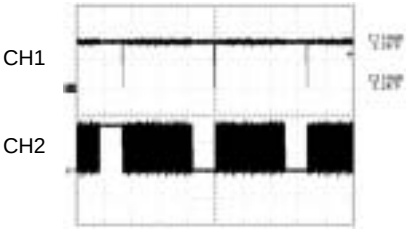
① **CH1: K4005 (VDI)**
CH2: K4006 (HDI)
V: 2V/div. H: 5msec/div.



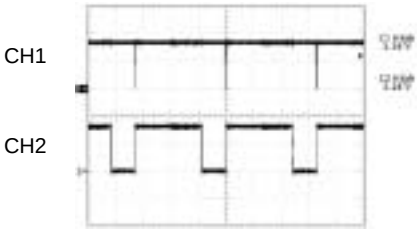
① **CH1: K4005 (VDI)**
CH2: K4006 (HDI)
V: 2V/div. H: 10µsec/div.



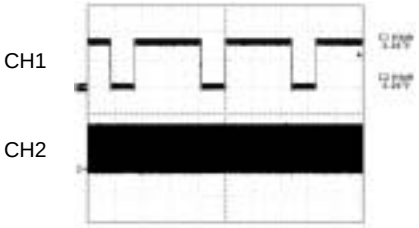
② **CH1: K4005 (VDI)**
CH2: CN4004-pin 29 (RAO)
V: 2V/div. H: 5msec/div.



③ **CH1: K4006 (HDI)**
CH2: K4003 (DEI)
V: 2V/div. H: 5µsec/div.



④ **CH1: K4003 (DEI)**
CH2: K4002 (DCLK)
V: 2V/div. H: 5µsec/div.



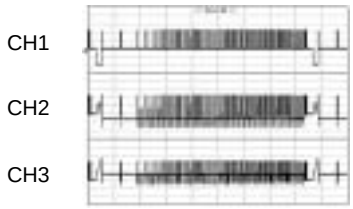
④ **CH1: K4003 (DEI)**
CH2: K4002 (DCLK)
V: 2V/div. H: 10nsec/div.

5 6 7 8

43 X DRIVE ASSY, 43 Y DRIVE ASSY and 43 SCAN A ASSY

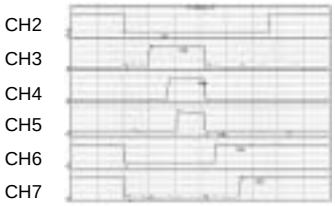
● Drive Output Waveform (1 field,color-bar)

CH1: R1226 (XPSUS) - K1201 (SUSGND)
(43 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND)
(43 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND)
(43 SCAN A ASSY)
V: 100V/div. H: 2msec/div.



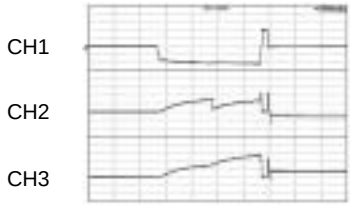
● Control Signal (Sustain Waveform Gen.)

CH2: K2016 (YSUS-G) - K2010 (DGND)
CH3: K2025 (YSUS-U1) - K2010 (DGND)
CH4: K2022 (YSUS-U2) - K2010 (DGND)
CH5: K2026 (YSUS-B) - K2010 (DGND)
CH6: K2024 (YSUS-D2) - K2010 (DGND)
CH7: K2027 (YSUS-D1) - K2010 (DGND)
(43 Y DRIVE ASSY)
V: 1V/div. H: 500nsec/div.



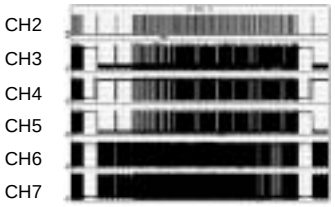
● Reset Pulse

CH1: R1226 (XPSUS) - K1201 (SUSGND)
(43 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND)
(43 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND)
(43 SCAN A ASSY)
V: 100V/div. H: 100µsec/div.



● Scan Control Signal (1 field, color-bar)

CH2: K2006 (SI) - K2029 (DGND)
CH3: K2009 (OC1) - K2029 (DGND)
CH4: K2004 (OC2) - K2029 (DGND)
CH5: K2007 (CLR) - K2029 (DGND)
CH6: K2003 (CLK2) - K2029 (DGND)
CH7: K2008 (LE) - K2029 (DGND)
(43 Y DRIVE ASSY)
V: 1V/div. H: 2msec/div.

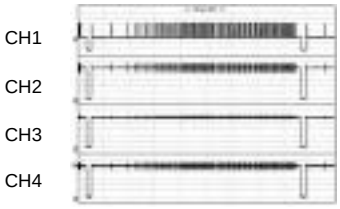


● Sustain Pulse (1 sub-sub-field)

CH1: R1226 (XPSUS) - K1201 (SUSGND)
(43 X DRIVE ASSY)
CH2: R2348 (YPSUS) - K2301 (SUSGND)
(43 Y DRIVE ASSY)
CH3: K3001 (Scan OUT) - K2301 (SUSGND)
(43 SCAN A ASSY)
V: 50V/div. H: 5µsec/div.

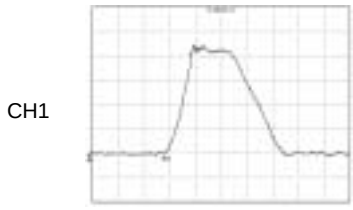
● X Drive Pulse Control Signal (color-bar)

CH1: R1226 (XPSUS) - K2301 (SUSGND)
V: 100V/div. H: 2msec/div.
CH2: K1016 (XCP-MSK) - K1020 (DGND)
CH3: K1015 (XSUS-MSK) - K1020 (DGND)
CH4: K1014 (XNR-D) - K1020 (DGND)
V: 1V/div. H: 2msec/div.
(43 X DRIVE ASSY)



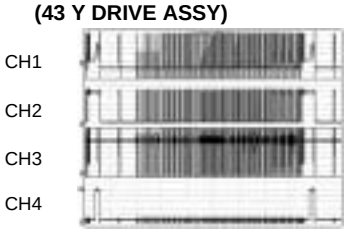
● Sustain Waveform

CH1: R2348 (YPSUS) - K2301 (SUSGND)
(43 Y DRIVE ASSY)
V: 50V/div. H: 500nsec/div.



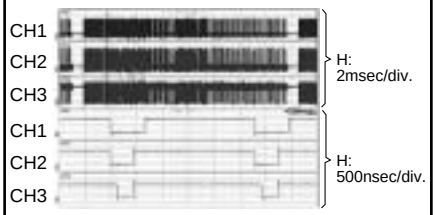
● Y Drive Pulse Control Signal (color-bar)

CH1: R2348 (YPSUS) - K2301 (SUSGND)
V: 50V/div. H: 2msec/div.
CH2: K2015 (YSUS-MSK) - K2010 (DGND)
CH3: K2017 (YSOFT-D) - K2010 (DGND)
CH4: K2023 (YPR-U) - K2010 (DGND)
V: 1V/div. H: 2msec/div.
(43 Y DRIVE ASSY)

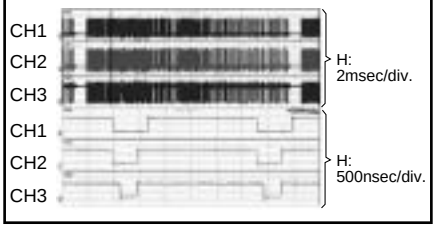


43 ADDRESS ASSY
• ADR RESONANCE BLOCK (VIDEO)

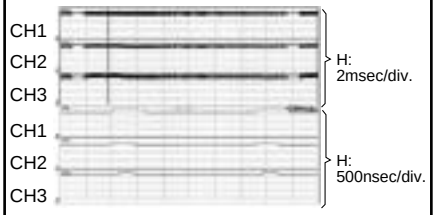
① CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1603-pin 4 (ADR_U1)
CH3: IC1603-pin 2 (ADR_D1)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



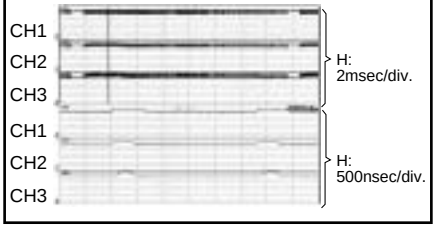
② CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1602-pin 4 (ADR_U2)
CH3: IC1602-pin 2 (ADR_D2)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



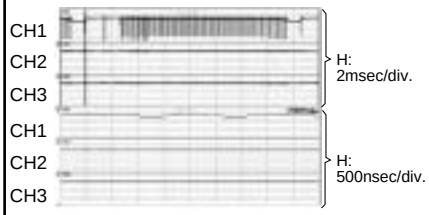
③ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1603-pin 4 (ADR_U1)
CH3: Q1603-pin 2 (ADR_D1)
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)



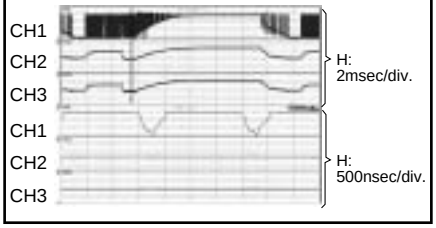
④ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1602-pin 4 (ADR_U2)
CH3: Q1602-pin 2 (ADR_D2)
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)



⑤ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: VIDEO, Signal: Color-bar)

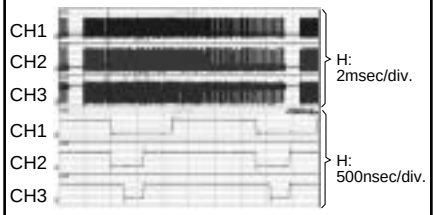


⑥ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: VIDEO, Signal: B/W(1×8))

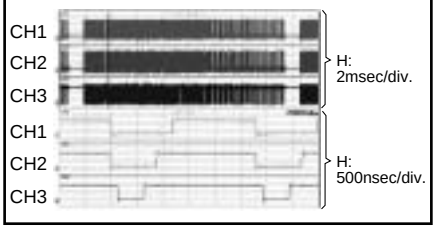


43 ADDRESS ASSY
• ADR RESONANCE BLOCK (PC)

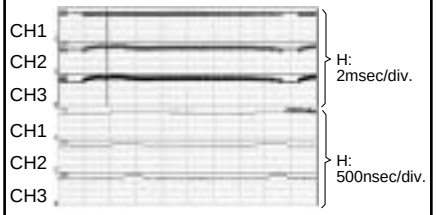
① CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1603-pin 4 (ADR_U1)
CH3: IC1603-pin 2 (ADR_D1)
V: 1V/div.
(Input: PC, Signal: Color-bar)



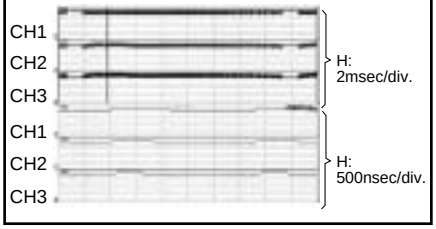
② CH1: IC1601-pin 2 (ADR_B2)
CH2: IC1602-pin 4 (ADR_U2)
CH3: IC1602-pin 2 (ADR_D2)
V: 1V/div.
(Input: PC, Signal: Color-bar)



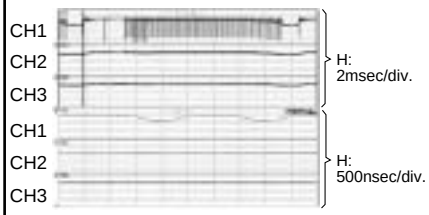
③ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1603-pin 4 (ADR_U1)
CH3: Q1603-pin 2 (ADR_D1)
V: 10V/div.
(Input: PC, Signal: Color-bar)



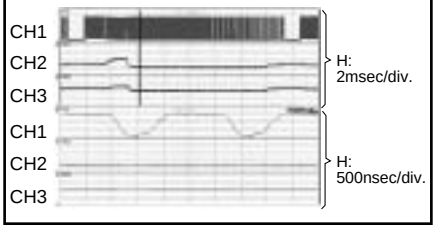
④ CH1: Q1601-pin 4 (ADR_B2)
CH2: Q1602-pin 4 (ADR_U2)
CH3: Q1602-pin 2 (ADR_D2)
V: 10V/div.
(Input: PC, Signal: Color-bar)



⑤ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: PC, Signal: Color-bar)

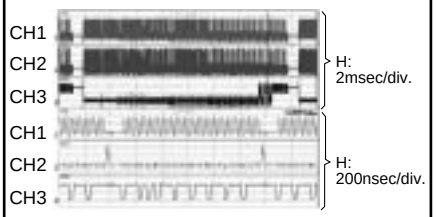


⑥ CH1: Q1601 Drain (V+ADR)
CH2: Q1603 Source
CH3: Q1602 Source
V: 10V/div.
(Input: PC, Signal: B/W(1×8))

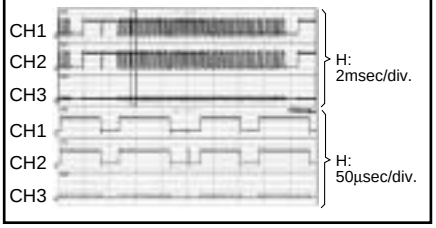


43 ADDRESS ASSY
• ADR LOGIC BLOCK

① CH1: IC1552-pin 18 (CLK input)
CH2: IC1552-pin 16 (LE input)
CH3: IC1552-pin 9 (DATA input)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



② CH1: IC1552-pin 23 (HBLK input)
CH2: IC1552-pin 19 (LBLK input)
CH3: IC1552-pin 25 (HZ input)
V: 1V/div.
(Input: VIDEO, Signal: Color-bar)



5. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→ *56 x 10[1]* →	*561*	*RD1/4PU561J*
47k Ω	→ *47 x 10[3]* →	*473*	*RD1/4PU473J*
0.5 Ω	→	*R50*	*RN2HR50K*
1 Ω	→	*1R0*	*RS1P1R0K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→ *562 x 10[1]* →	*5621*	*RN1/4PC5621F*

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
NSP	1	..43 ADDRESS ASSY	AWV2020
NSP	2	..43 ADDRESS ASSY	AWZ6793
NSP	1	..43 SCAN FUKUGO ASSY	AWV2023
NSP	2	..43 SCAN A ASSY	AWZ6796
NSP	2	..43 SCAN B ASSY	AWZ6797
NSP	2	..X CONNECTOR A ASSY	AWZ6798
NSP	2	..X CONNECTOR B ASSY	AWZ6799
NSP	1	..HD FUKUGO ASSY	AWV2017
	2	..PANEL IF ASSY	AWZ6786
	2	..PANEL LED ASSY	AWZ6787
	2	..PANEL KEY ASSY	AWZ6788
	2	..KEY CONTROL ASSY	AWZ6789
	2	..PANEL IR ASSY	AWZ6790
NSP	1	..DIGITAL VIDEO ASSY	AWV2070
	1	..HD AUDIO ASSY	AWV2019
	2	..HD SP TERMINAL ASSY	AWZ6792
	2	..HD AUDIO AMP ASSY	AWZ6834
NSP	1	..43 X DRIVE ASSY	AWV2021
	2	..43 X DRIVE ASSY	AWZ6794
	2	..PANEL SENSOR ASSY	AWZ6795
	1	..43 Y DRIVE ASSY	AWV2022
⚠	1	..POWER SUPPLY UNIT	AXY1068

43 ADDRESS ASSY

Mark	No.	Description	Part No.
		[ADR LOGIC BLOCK]	
		SEMICONDUCTORS	
		IC1501	PEE001B
		COILS AND FILTERS	
		F1501-F1503	ATF1194
		CAPACITORS	
		C1556,C1559,C1560,C1563 (330p/100V)	ACG1105
		C1501,C1502 (47/6.3V)	ACH1357
		C1503-C1507,C1555	CKSSYF104Z16
		C1558,C1561,C1564	CKSSYF104Z16
		RESISTORS	
		R1510,R1519,R1522	RAB4C470J
		R1505-R1509	RS1/16SS1000F
		Other Resistors	RS1/16S###J
		OTHERS	
		CN1501 40P FFC CONNECTOR	AKM1215
		[ADR RESONANCE BLOCK]	
		SEMICONDUCTORS	
		IC1601-IC1603	TND304S
		Q1604	2SA1163
		Q1601	HAT1081R
		Q1602,Q1603	HAT3019R
		D1601	1SS302
		D1608,D1609,D1617,D1618	EC10UA20
		D1610,D1611,D1616,D1619,D1620	EC11FS2
		D1604,D1612	MA126
		D1602,D1606,D1607,D1614,D1615	UDZS15B
		D1621,D1622	UDZS24B
		COILS AND FILTERS	
		L1601,L1602	ATH1135
		CAPACITORS	
		C1609,C1615 (0.47/100V)	ACE1171
		C1605,C1607,C1608,C1613,C1614 (0.01/100V)	ACG1101
		C1601,C1602 (56/80V)	ACH1347
		C1618 (47/6.3V)	ACH1357
		C1603 (47/16V)	ACH1391
		C1604,C1606,C1612	CKSSYF104Z16

Mark	No.	Description	Part No.
		RESISTORS	
A		R1631 (10,1/2W)	ACN1174
		Other Resistors	RS1/16S###J

43 SCAN A ASSY

		SEMICONDUCTORS	
		IC3001-IC3006	SN755864APZP
		D3001	KU10N16
		CAPACITORS	
		C3001,C3002,C3012,C3013 (0.1/250V)	ACG1088
B		C3023,C3024,C3034,C3035 (0.1/250V)	ACG1088
		C3045,C3046,C3056,C3057 (0.1/250V)	ACG1088
		C3005,C3008,C3016,C3019,C3026	CCSRCH101J50
		C3029,C3037,C3040,C3048,C3051	CCSRCH101J50
		C3060,C3063	CCSRCH101J50
		C3007,C3018,C3033,C3044,C3050	CCSRCH181J50
		C3062	CCSRCH181J50
		C3006,C3011,C3017,C3022	CCSRCH331J50
C		C3031,C3032,C3042,C3043,C3049	CCSRCH331J50
		C3055,C3061,C3066	CCSRCH331J50
		C3009,C3010,C3020,C3021,C3028	CCSRCH390J50
		C3030,C3039,C3041,C3053,C3054	CCSRCH390J50
		C3064,C3065	CCSRCH390J50
		C3003,C3014,C3025,C3036,C3047	CKSRYB105K6R3
		C3058	CKSRYB105K6R3
		RESISTORS	
		R3003,R3011,R3017,R3025,R3030	RAB4C221J
		R3036	RAB4C221J
		Other Resistors	RS1/16S###J
D		**OTHERS**	
		CN3001 15P CONNECTOR	AKP1218
		K3001,K3004,K3009,K3015,K3017 TEST PIN	AKX9002
		K3019,K3021 TEST PIN	AKX9002

43 SCAN B ASSY

		SEMICONDUCTORS	
		IC3201-IC3206	SN755864APZP
		D3201	KU10N16
E		**CAPACITORS**	
		C3201,C3211,C3212,C3222,C3223 (0.1/250V)	ACG1088
		C3233,C3234,C3244,C3245 (0.1/250V)	ACG1088
		C3255,C3256,C3266 (0.1/250V)	ACG1088
		C3203,C3204,C3214,C3215,C3226	CCSRCH101J50
		C3228,C3237,C3239,C3247,C3251	CCSRCH101J50
		C3258,C3259	CCSRCH101J50
		C3206,C3217,C3232,C3243,C3249	CCSRCH181J50
F		C3261	CCSRCH181J50
		C3205,C3210,C3216,C3221	CCSRCH331J50
		C3230,C3231,C3241,C3242,C3248	CCSRCH331J50
		C3254,C3260,C3265	CCSRCH331J50
		C3208,C3209,C3219,C3220,C3227	CCSRCH390J50
		C3229,C3238,C3240,C3252,C3253	CCSRCH390J50
		C3263,C3264	CCSRCH390J50
		C3202,C3213,C3224,C3235,C3246	CKSRYB105K6R3
		C3257	CKSRYB105K6R3
		RESISTORS	
		R3202,R3210,R3216,R3224,R3229	RAB4C221J
		R3235	RAB4C221J
		Other Resistors	RS1/16S###J
		OTHERS	
		CN3201 15P CONNECTOR	AKP1218
		K3203,K3208,K3214,K3216,K3218 TEST PIN	AKX9002
		K3220,K3221 TEST PIN	AKX9002

X CONNECTOR A ASSY

This assembly has no service part.

X CONNECTOR B ASSY

This assembly has no service part.

PANEL IF ASSY

		[PANEL IF BLOCK]	
		SEMICONDUCTORS	
		IC4002	24LC02B(I)SN
		⚠IC4003	PQ033EZ01ZP
		IC4006	TC74VHC541FT
		Q4007	DTA143EUA
		Q4004,Q4008,Q4009,Q4012	DTC143EUA
		Q4014-Q4016	DTC143EUA
		Q4005,Q4006,Q4010,Q4013,Q4017	RN1901
		Q4011	RN2901
		Q4001	SM6K2
		D4006	1SS355
		D4001-D4004,D4007	RB751V-40
		⚠D4005	UDZS5.1B
		COILS AND FILTERS	
		F4001,F4002	ATF1194
		L4001	LCTAW221J3225
		CAPACITORS	
		C4005,C4006	CCSRCH100D50
		C4019	CCSRCH101J50
		C4009,C4020	CCSRCH471J50
		C4011,C4018,C4021	CEAT101M10
		C4003,C4015	CEAT101M16
		C4004,C4010,C4012,C4014	CKSRYB103K50
		C4016,C4024,C4041	CKSSYF104Z16
		C4017	CKSRYF105Z10
		RESISTORS	
		R4006	RAB4C101J
		Other Resistors	RS1/16S###J
		OTHERS	

Mark	No.	Description	Part No.
	CN4004	114P FFC CONNECTOR	AKM1216
	CN4003	DVI SOCKET (24P)	AKP1216
	CN4002	SOCKET (20P)	AKP1226
	K4002-K4012	TEST PIN	AKX9002
	CN4006	3P TOP POST	B3B-EH

[TMDS RX BLOCK]

SEMICONDUCTORS

	IC4201	24LC01B
	IC4206	BA8274F
	IC4205	PST3628UR
	IC4202	SII169CTG100
	Q4203	DTC143EUA
	Q4215	SM6K2
	D4203,D4204	1SS355
	D4202	UDZS6.8B

COILS AND FILTERS

	F4201-F4204	ATF1194
	L4201	ATH1132

CAPACITORS

	C4208,C4215,C4218,C4222,C4230	CCSRCH331J50
	C4262	CCSRCH471J50
	C4207,C4210,C4232,C4233,C4236	CCSRCH820J50
	C4241,C4244,C4258	CCSRCH820J50
	C4212,C4239,C4242,C4246	CEAT101M10
	C4202,C4237,C4238	CEAT470M10
	C4260	CKSRYB472K50
	C4205,C4206,C4217,C4267	CKSRYF105Z10
	C4203,C4204,C4209,C4211,C4213	CKSSYF104Z16
	C4234,C4235,C4240,C4243,C4245	CKSSYF104Z16
	C4247,C4252,C4256,C4259,C4261	CKSSYF104Z16
	C4271	CKSSYF104Z16

RESISTORS

	R4241	RAB4C220J
	R4213-R4218,R4245,R4247	RAB4C470J
	R4253-R4255,R4257	RAB4C470J
	R4250	RS1/16S3900F
	Other Resistors	RS1/16S###J

OTHERS

	K4203,K4207	TEST PIN

AKX9002

PANEL LED ASSY

SEMICONDUCTORS

	D4751	SML-310MT
	D4752	SML-311UT

CAPACITORS

⚠	C4751-C4753	CCSRCH101J50

OTHERS

	CN4751	CONNECTOR 3P

B3B-ZR-3.4

PANEL KEY ASSY

SWITCHES AND RELAYS

	S4801-S4806	VSG1024

OTHERS

Mark	No.	Description	Part No.
	CN4801	6P FFC CONNECTOR	AKM1208

KEY CONTROL ASSY

SEMICONDUCTORS

	IC4851	PD5719A
	D4851-D4853,D4855,D4856	1SS302

CAPACITORS

⚠	C4856-C4858	CCSRCH101J50
	C4854	CEAT470M50
	C4853	CKSRYB103K50

RESISTORS

	R4858	RAB4C182J
	Other Resistors	RS1/16S###J

OTHERS

⚠	X4851	CERALOCK
	CN4851	6P FFC CONNECTOR

ASS1162

VKN1596

PANEL IR ASSY

SEMICONDUCTORS

	Q4901	2SC4116
	D4902	1SS302
	D4901	1SS355

CAPACITORS

	C4901	CEVW470M6R3
	C4903	CKSRYB102K50
	C4902	CKSRYB103K50
	C4904	CKSSYF104Z16

RESISTORS

	Other Resistors	RS1/16S###J

OTHERS

	U4901	REMOTE RECEIVER UNIT

RPM7240-H4

DIGITAL VIDEO ASSY

[DIGITAL IF BLOCK]

COILS AND FILTERS

	F5001,F5002,F5004	ATF1194

RESISTORS

	R5101-R5115,R5131	RAB4C470J
	Other Resistors	RS1/16S###J

OTHERS

	CN5001	114P FFC CONNECTOR
	K5002-K5004,K5007	TEST PIN
	CN5002	10P CONNECTOR

AKM1216

AKX9002

B10B-PH-SM3

[MODULE UCOM BLOCK]

SEMICONDUCTORS

	IC5206	24LC04B(I)SN
	IC5201	M30626FHPGP-P
	IC5205	PST3628UR
	IC5208	TC74VHC08FT
	IC5213	TC74VHC123AFT

Mark	No.	Description	Part No.
		IC5214,IC5215	TC74VHC32FT
		IC5211,IC5212	TC74VHC541FT
		IC5209	TC7W126FU
		Q5201	2SJ461
		D5207-D5212	1SS301
		D5217,D5218	1SS355
		D5201	SML-310LT
		SWITCHES AND RELAYS	
		S5201	ASH1047
		CAPACITORS	
		C5213,C5225 (47/6.3V)	ACH1357
		C5206,C5223,C5231	CKSRYB102K50
		C5245-C5264	CKSRYB102K50
		C5232	CKSRYB104K16
		C5230	CKSRYB105K6R3
		C5205	CKSRYB472K50
		C5201-C5204,C5208,C5210-C5212	CKSSYF104Z16
		C5218,C5224,C5226,C5227	CKSSYF104Z16
		C5243,C5244	CKSSYF104Z16
		RESISTORS	
		R5209,R5211,R5212,R5235	RAB4C101J
		R5254,R5255,R5265,R5266	RAB4C101J
		R5205	RAB4C103J
		R5270,R5271	RAB4C472J
		R5256,R5257	RAB4C474J
		Other Resistors	RS1/16S###J
		OTHERS	
		CN5201 PLUG 8-P	AKM1225
		K5201 TEST PIN	AKX9002
⚠		X5201 CERAMIC RESONATOR	ASS1178
		CN5202 3P PH CONNECTOR	B3B-PH-SM3
		[PANEL FLASH BLOCK]	
		SEMICONDUCTORS	
		IC5305	MBM29PL160BD-75PFTN
		IC5303	PST3612UR
		IC5301	PST3628UR
		IC5302	TC74VHC08FT
		Q5301	RN1901
		D5301-D5310	1SS302
		CAPACITORS	
		C5320	CCSRCH470J50
		C5304,C5307	CKSRYB102K50
		C5311,C5314	CKSRYB104K16
		C5303,C5306	CKSRYB472K50
		C5301,C5302,C5305,C5309,C5313	CKSSYF104Z16
		C5316	CKSSYF104Z16
		RESISTORS	
		R5317,R5318	RAB4C101J
		Other Resistors	RS1/16S###J
		OTHERS	
		CN5301 PLUG 15-P	AKM1232
		K5301 TEST PIN	AKX9002
⚠		X5302 CRYSTAL OSCILLATOR	ASS1174
⚠		X5301 CRYSTAL OSCILLATOR	ASS1176

Mark	No.	Description	Part No.
		[IC4 BLOCK]	
		SEMICONDUCTORS	
		IC5401	PD5856A
		D5401	SML-310LT
		D5402	SML-310MT
		COILS AND FILTERS	
		F5401,F5403,F5409,F5410	ATF1194
		CAPACITORS	
		C5401,C5413,C5417,C5424 (100/6.3V)	ACH1396
		C5434,C5435	CKSRYB102K50
		C5402-C5412,C5414-C5416	CKSSYF104Z16
		C5418-C5423,C5425-C5431	CKSSYF104Z16
		RESISTORS	
		R5406,R5421	RAB4C101J
		R5408-R5413,R5415,R5416,R5419	RAB4C220J
		R5422	RAB4C220J
		R5405	RS1/16S5601F
		Other Resistors	RS1/16S###J
		OTHERS	
		K5401 TEST PIN	AKX9002
		[ADDRESS CN BLOCK]	
		RESISTORS	
		Other Resistors	RS1/16S###J
		OTHERS	
		CN5521 50P CONNECTOR	AKM1201
⚠		CN5501-CN5508 40P CONNECTOR	AKM1217
		CN5511 30P FFC CONNECTOR	AKM1218
		[DIGITAL DD CON BLOCK]	
		SEMICONDUCTORS	
⚠		IC5602	PQ05DZ11
⚠		IC5603	PQ09DZ11
⚠		U5601	AXY1066
		Q5601,Q5603	HN1C01FU
		D5602,D5603,D5609,D5610	1SS355
		D5601	HZU2.2B
		D5604	UDZS5.1B
		CAPACITORS	
		C5601,C5603,C5607,C5614,C5616 (100/16V)	ACH1394
		C5602,C5604,C5615,C5617	CKSRYB103K50
		C5605,C5606,C5610	CKSSYF104Z16
		RESISTORS	
		R5601 (1,1/2W)	ACN1162
		R5627 (3.3,1/2W)	ACN1168
		Other Resistors	RS1/16S###J
		OTHERS	
⚠		CN5601 11P CONNECTOR	B11B-PH-SM3
⚠		CN5602 7P CONNECTOR	B7B-PH-SM3

HD SP TERMINAL ASSY

COILS AND FILTERS

Mark	No.	Description	Part No.
	L3701,L3702		ATF1206
	CAPACITORS		
⚠	C3701-C3704		CCSRCH101J50
	C3713-C3716		CCSRCH221J50
	C3709,C3710		CKSRYB332K50
	C3711,C3712		CKSRYF473Z50
	RESISTORS		
	R3701-R3704		RD1/2MMF100J
	OTHERS		
	J3701 6P HOUSING WIRE		ADX2838
	CN3701 SPEAKER TERMINAL		AKE1060
⚠	3701 SPEAKER SHIELD A		ANK1710
⚠	3702 SPEAKER SHIELD B		ANK1711

HD AUDIO AMP ASSY

SEMICONDUCTORS		
IC3502		BD3869AS
IC3504		LA4625
IC3501		NJM2195L
IC3503		NJM7809FA
Q3501,Q3502,Q3507,Q3510,Q3511		2SA1162
Q3503,Q3504,Q3508		2SC2712
Q3512		DTC124EK
D3501-D3504		1SS355
CAPACITORS		
C3525		CCSRCH221J50
C3501-C3504,C3520,C3528-C3532		CEAT100M50
C3505,C3526,C3549,C3557,C3564		CEAT101M16
C3519		CEAT1R0M50
C3536		CEAT220M50
C3537,C3538		CEAT2R2M50
C3551,C3552		CEAT330M25
C3566		CEHAT101M10
C3561		CEHAT101M16
C3562,C3565		CEHAT220M50
C3559,C3560		CEHAT2R2M50
C3509		CEHAT331M16
C3507		CEHAT471M25
C3571		CEHAT472M25
C3563		CEHATR47M50
C3512,C3522,C3572		CFTLA103J50
C3511,C3513-C3518,C3533,C3534		CFTLA104J50
C3545-C3548,C3573-C3576		CFTLA104J50
C3521		CFTLA333J50
C3524		CFTLA334J50
C3523		CFTLA474J50
C3506,C3508,C3510,C3527,C3535		CKSRYB103K50
C3550,C3558		CKSRYB103K50
C3543,C3544		CQMA222J50
RESISTORS		
R3599-R3602		RD1/2MMF2R2J
Other Resistors		RS1/16S###J
OTHERS		
3511 AUDIO HEATSINK		ANH1612
CN3504 3P CONNECTOR		B3P-VH
3512-3515 SCREW		VBB30P100FNI
KN3501,KN3502 WRAPPING TERMINAL		VNF1084

Mark	No.	Description	Part No.

43 X DRIVE ASSY

[X LOGIC BLOCK]		
SEMICONDUCTORS		
IC1002		TC74ACT540FT
IC1001		TC74ACT541FT
IC1003		TC74VHC08FT
CAPACITORS		
C1001		CEHAT470M25
C1002-C1004		CKSRYB104K16
RESISTORS		
R1001,R1002,R1005		RAB4C470J
R1003,R1004,R1007		RAB4C472J
OTHERS		
CN1001 30P FFC CONNECTOR		AKM1218
[RESONANCE BLOCK]		
SEMICONDUCTORS		
IC1103		BA10393F
IC1101,IC1102		TND506MD
Q1113		2SC2412K
Q1102,Q1103,Q1111,Q1112,Q1114		2SK3560
Q1105,Q1106,Q1108,Q1109		2SK3723
Q1101,Q1104,Q1107,Q1110		CPH5506
D1109,D1122		1SS302
D1101,D1102,D1104,D1105		EC11FS4
D1107,D1108,D1111,D1114-D1117		EC11FS4
D1120,D1121,D1127,D1128		EC11FS4
D1103,D1106,D1113,D1118		TCU20A30
D1124,D1125		TCU20A30
D1110,D1123		UDZS16B
COILS AND FILTERS		
L1104		ATH1119
L1102		ATH1133
L1103,L1105		ATH1134
L1101		LFEA470J
CAPACITORS		
C1113,C1114,C1126,C1127 (3.3/250V)		ACE1168
C1111,C1124 (100p/630V)		ACG1104
C1109,C1119 (0.1/630V)		ACG1108
C1101,C1105,C1116,C1117		CCSRCH331J50
C1128,C1130-C1132		CKSRYB104K16
C1102,C1118		CKSRYB105K6R3
C1104,C1108,C1115,C1122		CKSYB105K25
RESISTORS		
R1116,R1122		RS1/10S1003F
R1133,R1143-R1145		RS1/10S100J
R1103,R1106,R1118,R1119,R1153		RS1/10S2R2J
R1136		RS1/16S1202F
R1139		RS1/16S3301F
R1130		RS1/16S5601F
R1134		RS1/16S8201F
R1113,R1128		RS1MMF101J
VR1101-VR1104		CCP1390

Mark No.	Description	Part No.
	Other Resistors	RS1/16S###J

[SUS BLOCK]

SEMICONDUCTORS

IC1202	HCPL-M611
IC1205	NJM2872F05
IC1203,IC1207	STK795-510
IC1208	TLP181(P-GR)
IC1204,IC1206	TND301S
Q1207	2SC2412K
Q1203	2SD1898
Q1302	2SJ522
Q1301	2SK2503
Q1205	2SK2908-01S
Q1206,Q1208	DTC124EK
Q1201	HN1B04FU
D1212	1SS302
D1211,D1213,D1216	1SS355
D1201,D1207	EC10QS04
D1204,D1301	EC11FS4
D1214	EC8FS6
D1208	UDZS5.6B

COILS AND FILTERS

L1204,L1205	ATH1112
L1202	LFEA100J
L1203,L1206	LFEA470J

CAPACITORS

C1214-C1217,C1227-C1230	ACE1163
C1233 (0.12/250V)	ACE1169
C1244 (0.1/250V)	ACE1170
C1209 (0.1/630V)	ACG1092
C1219,C1231	ACH1359
C1224	CEHAT101M16
C1301	CEHAT221M25
C1203,C1207,C1210,C1220,C1223	CEHAT470M25
C1238,C1239	CEHAT470M25
C1235	CKSRYB102K50
C1213,C1225,C1240,C1241,C1243	CKSRYB104K16
C1202,C1205,C1206,C1212,C1302	CKSRYF104Z50

RESISTORS

R1230	ACN1166
R1208 (10,1/2W)	ACN1174
R1304 (560,1/10W)	ACN1195
R1305 (1k,1/2W)	ACN1198
R1301,R1302,R1314	RS1/10S122J
R1226,R1251	RS1MMF361J
R1235,R1236	RS2MMF121J
Other Resistors	RS1/16S###J

OTHERS

KN1201-KN1205,KN1208 (GROUND PLATE)	ANK-142
KN1210-KN1212,KN1214 (GROUND PLATE)	ANK-142
CN1201 12P CONNECTOR	B12B-EH

[D-D CON BLOCK]

Mark No.	Description	Part No.

SEMICONDUCTORS

IC1404	AN1431M
IC1402	MIP161
IC1401,IC1403	TLP181(P-GR)
Q1401	2SA1037K
Q1402	2SC2412K
D1407,D1408	EC11FS2
D1404	EC8FS6
D1401,D1403	UDZS5.6B

COILS AND FILTERS

L1401	ATH1110
T1401	ATK1153

CAPACITORS

C1401,C1402 (22/315V)	ACH1361
C1404	CEHAT101M16
C1405	CEHAT101M25
C1409	CEHAT331M16
C1403,C1407,C1408,C1411	CKSRYB104K16
C1406	CKSRYF104Z50

RESISTORS

R1405,R1406,R1408-R1410,R1414	RS1/10S3602F
R1420	RS1/16S1101F
R1403	RS1/16S2702F
R1401,R1404	RS1/16S4701F
R1417	RS1/16S7500F
VR1401 (1k)	CCP1390
Other Resistors	RS1/16S###J

OTHERS

1002 CARD SPACER	AEC1957
1001 DRIVE SIRICON SHEET A	AEH1062
1001 PLATE X	ANG2622
1001 DRIVE HEATSINK A	ANH1613
1001 SCREW	BMZ30P080FZK
1002 SCREW	PMB30P060FNI

PANEL SENSOR ASSY

SEMICONDUCTORS

IC1072	MM1522XU
IC1071	MM3012XN

CAPACITORS

C1075 (47/6.3V)	ACH1357
C1074	CKSRYB103K50
C1071,C1076	CKSRYB104K16
C1072,C1073	CKSRYF105Z10

RESISTORS

R1076,R1078	RS1/16S1001F
Other Resistors	RS1/16S###J

43 Y DRIVE ASSY

OTHERS

2002 CARD SPACER	AEC1957
2001 DRIVE SIRICON SHEET A	AEH1062
2001 PLATE Y	ANG2557
2001 DRIVE HEATSINK A	ANH1613
2001 SCREW	BMZ30P080FZK

Mark No.	Description	Part No.
2002	SCREW	PMB30P060FNI

[Y LOGIC BLOCK]

SEMICONDUCTORS

IC2002		TC74ACT540FT
IC2001,IC2003		TC74ACT541FT
IC2005		TC74VHC08FT
IC2004		TC74VHC541FT
Q2001		DTC124EK

CAPACITORS

C2001		CEHAT470M16
C2010,C2011		CKSRYB104K16
C2002-C2006		CKSRYF104Z50

RESISTORS

R2018,R2019		RAB4C102J
R2002,R2004,R2013-R2015		RAB4C470J
R2005,R2006,R2012,R2016,R2017		RAB4C472J
Other Resistors		RS1/16S###J

OTHERS

CN2001	50P CONNECTOR	AKM1201

[Y RESONANCE BLOCK]

SEMICONDUCTORS

IC2211		BA10393F
IC2201,IC2202		TND506MD
Q2213		2SC2412K
Q2202,Q2203,Q2211,Q2212,Q2214		2SK3560
Q2205,Q2206,Q2208,Q2209		2SK3723
Q2201,Q2204,Q2207,Q2210		CPH5506
D2209,D2223		1SS302
D2202-D2205,D2207,D2208		EC11FS4
D2213,D2214,D2216-D2219,D2222		EC11FS4
D2226,D2227		EC11FS4
D2201,D2206,D2211,D2215,D2220		TCU20A30
D2225		TCU20A30
D2210,D2224		UDZS16B

COILS AND FILTERS

L2204		ATH1119
L2202		ATH1133
L2203,L2205		ATH1134
L2201		LFEA470J

CAPACITORS

C2212,C2213,C2226,C2227	(3.3/250V)	ACE1168
C2211,C2224	(100p/630V)	ACG1104
C2210,C2223	(0.1/630V)	ACG1108
C2202,C2205,C2216,C2217		CCSRCH331J50
C2230,C2232,C2233,C2235		CKSRYB104K16
C2203,C2218		CKSRYB105K6R3
C2201,C2208,C2215,C2219		CKSYB105K25

RESISTORS

R2240,R2241		RS1/10S1003F
R2244-R2247		RS1/10S100J
R2204,R2205,R2220,R2221,R2253		RS1/10S2R2J
R2234		RS1/16S1202F
R2235		RS1/16S3301F
R2233		RS1/16S5601F
R2242		RS1/16S8201F
R2215,R2230		RS1MMF101J
VR2201-VR2204	(1k)	CCP1390
Other Resistors		RS1/16S###J

[Y SUS BLOCK]

SEMICONDUCTORS

IC2302,IC2308		HCPL-M611
IC2305		NJM2872F05
IC2303,IC2307		STK795-511
IC2301,IC2304,IC2309		TND301S
Q2310		2SC2412K
Q2303,Q2307		2SD1898
Q2301		2SJ522
Q2302,Q2308,Q2312		2SK3325-Z
Q2309		HN1B04FU
D2302		1SS302
D2305		EC11FS4
D2301		UDZS16B
D2306,D2318		UDZS5.6B

COILS AND FILTERS

L2306,L2307		ATH1112
L2304		LFEA100J
L2308		LFEA101J
L2301,L2302,L2305		LFEA470J

CAPACITORS

C2309-C2312,C2326,C2327	(1.5/300V)	ACE1163
C2329,C2330	(1.5/300V)	ACE1163
C2314	(0.047/250V)	ACE1165
C2302	(0.1/630V)	ACG1092
C2316,C2331	(300/280V)	ACH1359
C2303	(22/315V)	ACH1361
C2336	(220/100V)	ACH1393
C2306,C2334		CEHAT221M25
C2308,C2324,C2339,C2340		CEHAT470M16
C2304,C2320,C2338		CEHAT470M25
C2305,C2322,C2323,C2325,C2333		CKSRYB104K16
C2341		CKSRYB104K16
C2301,C2307,C2328		CKSRYF104Z50

RESISTORS

R2332	(2.2,1/2W)	ACN1166
R2309		RS1MMF132J
R2310,R2311		RS1MMF472J
R2312-R2314,R2322,R2323		RS3LMF100J
R2348,R2352,R2358,R2359		RS3LMF1R8J
Other Resistors		RS1/16S###J

OTHERS

KN2301-KN2305,KN2310	(GROUND PLATE)	ANK-142
KN2312,KN2314,KN2316	(GROUND PLATE)	ANK-142
CN2301	11P CONNECTOR	B11B-EH

[Y SCAN BLOCK]

Mark No.	Description	Part No.
	SEMICONDUCTORS	
	IC2101,IC2103-IC2106	HCPL-M611
	IC2108,IC2109	HCPL-M611
	IC2102,IC2107	TC74ACT540FT
	COILS AND FILTERS	
	L2101-L2103	LFEA100J
	CAPACITORS	
	C2104,C2111 (47/160V)	ACH1392
	C2101,C2107,C2113	CEHAT221M16
	C2102,C2103,C2105,C2106	CKSRYB104K16
	C2108-C2110,C2112,C2114	CKSRYB104K16
	RESISTORS	
	R2121,R2128	RAB4C472J
	Other Resistors	RS1/16S###J
	OTHERS	
	CN2101,CN2102 15P CONNECTOR	AKM1200
	[Y D-D CON BLOCK]	
	SEMICONDUCTORS	
	IC2410-IC2412	AN1431M
	IC2406	BA10358F
	IC2401	MIP0223SC
	IC2402-IC2405,IC2407-IC2409	TLP181(P-GR)
	Q2402,Q2407	2SA1037K
	Q2410	2SA1163
	Q2417	2SA1535
	Q2411-Q2414,Q2416	2SC2412K
	Q2405	2SC2713
	Q2403	2SD1664
	Q2401,Q2404	2SD1898
	Q2415	HN1C01FU
	D2430	1SS301
	D2410,D2419,D2436	1SS302
	D2409,D2418	1SS355
	D2404-D2407	EC11FS2
	D2403,D2414	EC11FS4
	D2402	EC8FS6
	D2427	RD91PA
	D2401	U1ZB330
	D2412, D2413, D2422	UDZS15B
	D2425,D2426	UDZS27B
	D2415	UDZS33B
	D2432	UDZS4.3B
	D2423,D2431	UDZS5.6B
	COILS AND FILTERS	
	T2402	ATK1156
	T2403	ATK1157
	T2401	ATK1158
	L2402	LFEA100J
	L2401	LFEA101J
	L2403	LFEA470J
	CAPACITORS	
	C2406 (100/160V)	ACH1360
	C2401 (22/315V)	ACH1361
	C2427	CEHAT100M50
	C2403	CEHAT101M16

Mark No.	Description	Part No.
	C2405,C2407,C2417	CEHAT101M25
	C2414	CEHAT221M16
	C2410	CEHAT221M25
	C2411	CEHAT331M25
	C2420	CEHAT470M2A
	C2409,C2419	CKSRYB103K50
	C2402,C2412,C2413,C2423,C2425	CKSRYB104K16
	C2431,C2432,C2434-C2436	CKSRYB104K16
	C2441-C2443	CKSRYB104K16
	C2415,C2421,C2428	CKSRYB105K6R3
	C2404,C2408,C2416,C2418,C2426	CKSRYF104Z50
	C2429	CKSRYF104Z50
	RESISTORS	
	R2429 (180k,1/2W)	ACN1225
	R2435,R2439	RS1/10S2202F
	R2402-R2404	RS1/10S3902F
	R2442	RS1/16S1201F
	R2468	RS1/16S1202F
	R2424	RS1/16S2001F
	R2420,R2427,R2438	RS1/16S2201F
	R2467	RS1/16S3301F
	R2457-R2460	RS1/16S4701F
	R2506	RS3LMF151J
	VR2401,VR2402 (1k)	CCP1390
	Other Resistors	RS1/16S###J
	OTHERS	
	2401 HEATSINK	ANH1614
	2401 SCREW	BBZ30P080FZK

6. ADJUSTMENT

6.1 ADJUSTMENT REQUIRED WHEN THE SET IS REPAIRED OR REPLACED

■ 43 X DRIVE Assy

• **When replaced**

VRN Voltage adjustment.

■ 43 Y DRIVE Assy

• **When replaced**

No adjustment is required, because necessary adjustment has already been made.

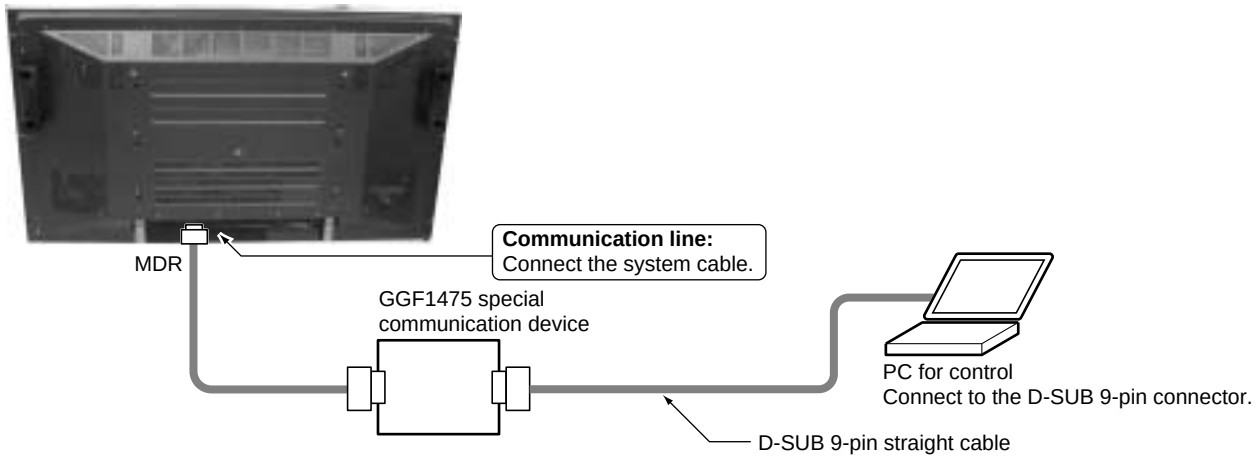
6.2 COMMAND

6.2.1 RS232C COMMAND

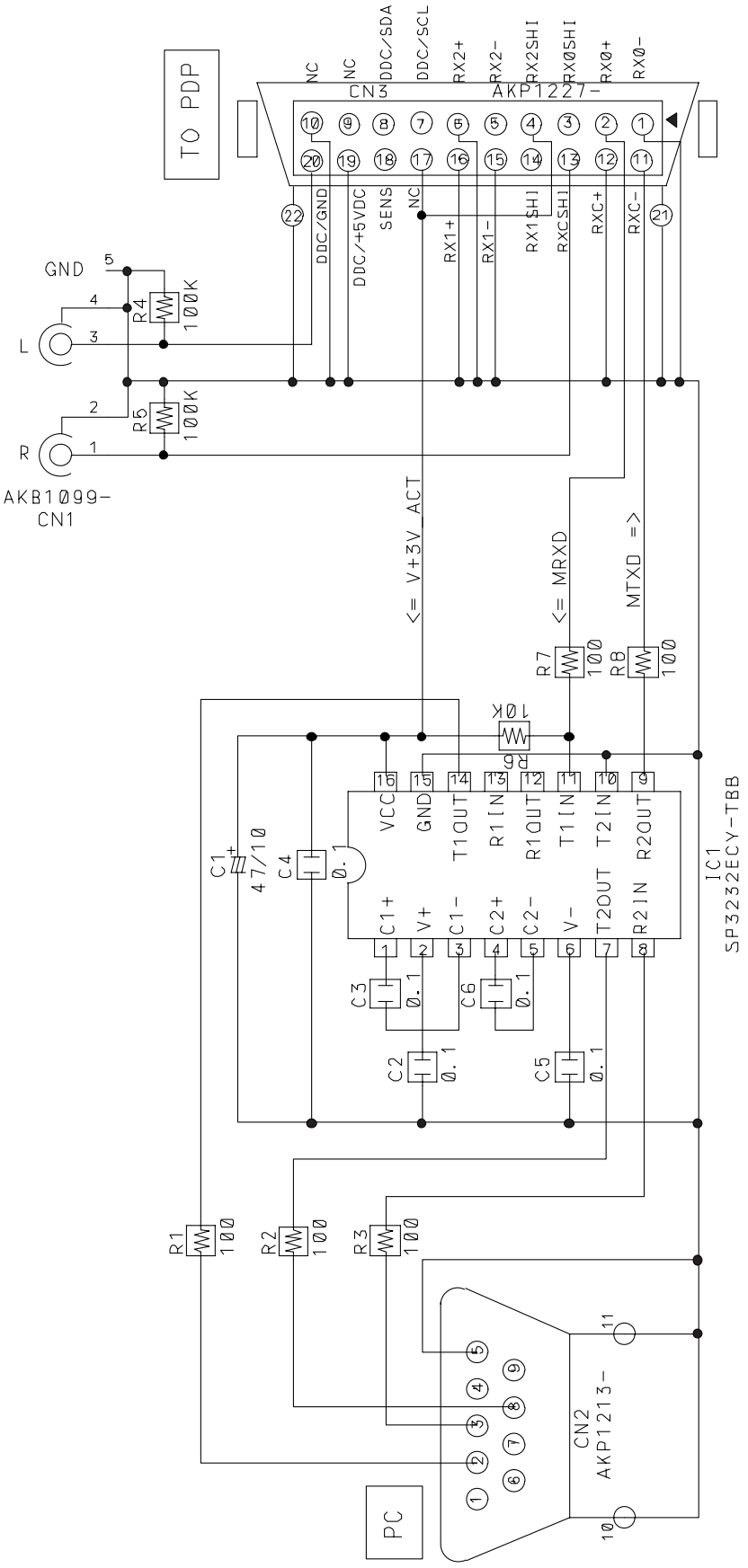
• The panel control items for the PDP-434PU system can be controlled with the RS-232C commands by connecting a PC through the GGF1475 special communication device when the Media Receiver is not connected with the PDP.

Note: The special communication device for the PDP-503P cannot be used with this unit, because the control lines within the MDR cable are different.

■ Connection



• Schematic diagram of Jig



• RS-232C Commands for the module microcomputer

Command Name			Function	Validity of direct numeric input		
				Validity	Lower limit	Upper limit
1	ABL	ABL ADJUSTMENT	Adjusting the upper limit of the power	❍	0000	255
2	AMN	AUDIO MUTE NO	Turning off the audio muting			
3	AMY	AUDIO MUTE YES	Turning on the audio muting			
4	BAL	BALANCE ADJUSTMENT	Adjusting the audio balance	❍	98	158
5	BAS	BASS ADJUSTMENT	Adjusting the audio bass	❍	121	135
6	BCP	BACKUP COPY	Copying the backup data in the EEPROM			
7	CTM	CLEAR TRAP MEMORY	Clearing the TRAP log that records detection of opening of the rear cover			
8	DRF	DRIVE OFF	Driving off			
9	DRN	DRIVE ON	Driving on			
10	F50	FREQENCY VIDEO 50Hz	Setting the frequency in Mask mode to 50 Hz (VIDEO)			
11	F60	FREQENCY VIDEO 60Hz	Setting the frequency in Mask mode to 60 Hz (VIDEO)			
12	F61	FREQENCY PC 60Hz	Setting the frequency in Mask mode to 60 Hz (PC)			
13	F70	FREQENCY PC 70Hz	Setting the frequency in Mask mode to 70 Hz (PC)			
14	F72	FREQENCY VIDEO 72Hz	Setting the frequency in Mask mode to 72 Hz (VIDEO)			
15	F75	FREQENCY VIDEO 75Hz	Setting the frequency in Mask mode to 75 Hz (VIDEO)			
16	FAJ	FINISH ADJUSTMENT	Z-number F003 to 0003			
17	FCN	FOCUS NO	Turning the FOCUS function off			
18	FCY	FOCUS YES	Turning the FOCUS function on			
19	GAJ	GET ADJUSTMENT	Obtaining various adjustment values			
20	GPD	GET POWER-DOWN	Obtaining the power-down-point log			
21	GPW	GET PANEL WHITE BALANCE	Obtaining the panel white-balance adjustment values			
22	GS1	GET STATUS 1	Obtaining information on the unit, such as the software version			
23	GS2	GET STATUS 2	Obtaining information on the status of the unit, such as the temperature			
24	GSD	GET SHUT DOWN	Obtaining information on shutdown			
25	LNN	LOUDNESS NO	Turning the Loudness function off			
26	LNY	LOUDNESS YES	Turning the Loudness function on			
27	M00	MASK MODE 0	Turning the Mask function off			
28	M01	MASK MODE 1	White raster (change in luminance level)			
29	M02	MASK MODE 2	White raster--zigzag, exact reverse--scan--gray--white raster			
30	M03	MASK MODE 3	White raster--zigzag, exact reverse--scan--gray--white raster			
31	M10	MASK MODE 10	H ramp (slant 1)			
32	M11	MASK MODE 11	H ramp (slant 4)			
33	M12	MASK MODE 12	H ramp (slant 1 shifting)			
34	M13	MASK MODE 13	H ramp (slant 4 shifting)			
35	M14	MASK MODE 14	V ramp (slant 1)			
36	M15	MASK MODE 15	Slanting ramp			
37	M20	MASK MODE 20	Window (for WB adjustment, Hi = 870, Lo = 102)			
38	M21	MASK MODE 21	Window (for WB adjustment, Hi = 1023, Lo = 102)			
39	M22	MASK MODE 22	Window (for measuring the peak luminance during WB adjustment, Hi = 1023)			
40	M23	MASK MODE 23	Window (for measuring the peak luminance, Hi = 1023, 4%)			
41	M24	MASK MODE 24	Window (for measuring the peak luminance, Hi = 1023, 1.25%)			
42	M25	MASK MODE 25	Window (vertical line with 1/7-width for measuring the stress)			
43	M26	MASK MODE 26	Window (magenta, green, and stripe for check)			
44	M27	MASK MODE 27	Window (green,magenta, and stripe for checker)			
45	M28	MASK MODE 28	Window (black & white [1 x 8], checker, for EMG check)			
46	M29	MASK MODE 29	Window (for WB adjustment, magenta = 512, yellow = 512)			
47	M2E	MASK MODE 2E	Wiper for erasing afterimage			
48	M2F	MASK MODE 2F	Mask for warning of cable disconnection			
49	M30	MASK MODE 30	ColorBar			
50	M31	MASK MODE 31	Slanted lines (for checking cable disconnection)			
51	M51	MASK MODE 51	Raster-white			
52	M52	MASK MODE 52	Raster-red			
53	M53	MASK MODE 53	Raster-green			
54	M54	MASK MODE 54	Raster-blue			
55	M55	MASK MODE 55	Raster-black			
56	M56	MASK MODE 56	Raster-cyan 1023			
57	M57	MASK MODE 57	Raster-magenta 1023			
58	M58	MASK MODE 58	Raster-yellow 1023			
59	M59	MASK MODE 59	Raster-cyan 274			
60	M60	MASK MODE 60	Raster-flesh color_50			
61	M61	MASK MODE 61	Raster-light purple_50			
62	M62	MASK MODE 62	Raster-sky blue_50			
63	M63	MASK MODE 63	Raster-red 779			
64	M64	MASK MODE 64	Raster-cyan 218			
65	M65	MASK MODE 65	Raster-cyan 448			

Command Name			Function	Validity of direct numeric input		
				Validity	Lower limit	Upper limit
66	M66	MASK MODE 66	Raster-flesh color_43			
67	M67	MASK MODE 67	Raster-red 640			
68	M68	MASK MODE 68	Raster-magenta 98			
69	M69	MASK MODE 69	Raster-sky blue 1_43			
70	M70	MASK MODE 70	Raster-sky blue 2_43			
71	M71	MASK MODE 71	Raster-light purple_43			
72	M72	MASK MODE 72	Raster-blue 60			
73	M73	MASK MODE 73	Raster-gray 512 (reservation)			
74	M74	MASK MODE 74	Raster-gray 512 (reservation)			
84	MTN	MUTE NO	Canceling panel muting			
85	MTY	MUTE YES	Panel muting			
86	NMN	NEGATIVE MODE NO	Canceling negative-positive inversion display			
87	NMY	NEGATIVE MODE YES	Negative-positive inversion display			
88	PBH	PANEL BLUE HIGH	Panel white-balance adjustment: Blue highlight	○	000	511
89	PBL	PANEL BLUE LOW	Panel white-balance adjustment: Blue low light	○	000	999
90	PCN	PC RGB NO	Setting input-signal type to video			
91	PCY	PC RGB YES	Setting input-signal type to PC			
92	PGH	PANEL GREEN HIGH	Panel white-balance adjustment: Green highlight	○	000	511
93	PGL	PANEL GREEN LOW	Panel white-balance adjustment: Green low light	○	000	999
94	PLA	BRIGHT ENHANCE A	Center luminance-compensation function on (no correspondence with APL)			
95	PLB	BRIGHT ENHANCE B	Center luminance-compensation function on (in correspondence with APL)			
96	PLN	BRIGHT ENHANCE NO	Center luminance-compensation function off			
97	POF	POWER OFF	Power off			
98	PON	POWER ON	Power on			
99	PRH	PANEL RED HIGH	Panel white balance adjustment-red highlight	○	000	511
100	PRL	PANEL RED LOW	Panel white-balance adjustment: Red low light	○	000	999
101	SCN	SYSTEM CABLE NO	Prohibiting monitoring of cable-disconnection detection			
102	SCY	SYSTEM CABLE YES	Permitting monitoring of cable-disconnection detection			
103	SRN	SRS NO	SRS function off			
104	SRY	SRS YES	SRS function on			
105	TBN	TRUBASS NO	TruBass function off			
106	TBY	TRUBASS YES	TruBass function on			
107	TRE	TREBLE ADJUSTMENT	Audio treble adjustment	○	121	135
108	TSN	TRAP SW NO	Prohibiting detection of opening of the rear case			
109	TSY	TRAP SW YES	Permitting detection of opening of the rear case			
110	UAJ	UN-ADJUSTMENT	Z-number 0003 to F003			
111	VOF	Vofs ADJUSTMENT	Vofs voltage reference-value adjustment	○	000	255
112	VOL	VOLUME	Audio volume adjustment	○	000	060
113	VSU	Vsus ADJUSTMENT	Vsus voltage reference-value adjustment	○	000	255
114	XD1	XSUS-D-1	XSUS-D-1 adjustment	○	000	255
115	XD2	XSUS-D-2	XSUS-D-2 adjustment	○	000	255
116	XU1	XSUS-U-1	XSUS-U-1 adjustment	○	000	255
117	XU2	XSUS-U-2	XSUS-U-2 adjustment	○	000	255
118	YD1	YSUS-D1-1	YSUS-D1-1 adjustment	○	000	255
119	YD2	YSUS-D1-2	YSUS-D1-2 adjustment	○	000	255
120	YD3	YSUS-D2-1	YSUS-D2-1 adjustment	○	000	255
121	YD4	YSUS-D2-2	YSUS-D2-2 adjustment	○	000	255
122	YU1	YSUS-U-1	YSUS-U-1 adjustment	○	000	255
123	YU2	YSUS-U-2	YSUS-U-2 adjustment	○	000	255

■ Command description

Command	Function
GAJ	Obtaining various adjustment values
GPD	Obtaining power-down-point log
GPW	Obtaining panel white-balance adjustment values
GS1	Obtaining information on the unit, such as the software version
GS2	Obtaining information on the status of the unit
GSD	Obtaining information on shutdown

GAJ: Obtaining data on ABL setting values, electronic-control adjustment values, and drive-system adjustment values

Order	Data	Size	Remarks
1	ABL table currently used	3 bytes	AB1 - AB3
2	Upper limit of power	3 bytes	000 - 255
3	Vsus adjustment value	3 bytes	000 - 255
4	Vofs adjustment value	3 bytes	000 - 255
5	X-SUS-U1 adjustment value (XU1)	3 bytes	000 - 255
6	X-SUS-U2 adjustment value (XU2)	3 bytes	000 - 255
7	X-SUS-D2 adjustment value (XD2)	3 bytes	000 - 255
8	X-SUS-D1 adjustment value (XD1)	3 bytes	000 - 255
9	Y-SUS-U1 adjustment value (YU1)	3 bytes	000 - 255
10	Y-SUS-U2 adjustment value (YU2)	3 bytes	000 - 255
11	Y-SUS-D1-2 adjustment value (YD2)	3 bytes	000 - 255
12	Y-SUS-D1-1 adjustment value (YD1)	3 bytes	000 - 255
13	Y-SUS-D2-2 adjustment value (YD4)	3 bytes	000 - 255
14	Y-SUS-D2-1 adjustment value (YD3)	3 bytes	000 - 255

Note: Ignore the 2-byte checksum at the end.

GPD: Obtaining power-down-point log on the panel

Order	Data	Size	Remarks
1	Latest "1st PD" data	1 byte	0-C or F
2	Latest "2nd PD" data	1 byte	0-C or F
3	Data of hour meter for the latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
4	Data on temperature for the latest PD (TEMP1)	3 bytes	000 - 255
5	Second latest "1st PD" data	1 byte	0-C or F
6	Second latest "2nd PD" data	1 byte	0-C or F
7	Data of hour meter for the second latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
8	Data on temperature for the second latest PD (TEMP1)	3 bytes	000 - 255
9	Third latest "1st PD" data	1 byte	0-C or F
10	Third latest "2nd PD" data	1 byte	0-C or F
11	Data of hour meter for the third latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
12	Data on temperature for the third latest PD (TEMP1)	3 bytes	000 - 255
13	Fourth latest "1st PD" data	1 byte	0-C or F
14	Fourth latest "2nd PD" data	1 byte	0-C or F
15	Data of hour meter for the fourth latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
16	Data on temperature for the fourth latest PD (TEMP1)	3 bytes	000 - 255
17	Fifth latest "1st PD" data	1 byte	0-C or F
18	Fifth latest "2nd PD" data	1 byte	0-C or F
19	Data of hour meter for the fifth latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
20	Data on temperature for the fifth latest PD (TEMP1)	3 bytes	000 - 255
21	Sixth latest "1st PD" data	1 byte	0-C or F
22	Sixth latest "2nd PD" data	1 byte	0-C or F
23	Data of hour meter for the sixth latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
24	Data on temperature for the sixth latest PD (TEMP1)	3 bytes	000 - 255
25	Seventh latest "1st PD" data	1 byte	0-C or F
26	Seventh latest "2nd PD" data	1 byte	0-C or F
27	Data of hour meter for the seventh latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
28	Data on temperature for the seventh latest PD (TEMP1)	3 bytes	000 - 255
29	Eighth latest "1st PD" data	1 byte	0-C or F
30	Eighth latest "2nd PD" data	1 byte	0-C or F
31	Data of hour meter for the eighth latest PD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
31	Data on temperature for the eighth latest PD (TEMP1)	3 bytes	000 - 255

Notes: • Ignore the 2-byte checksum at the end. • For details, see "Description on power-down."

• Description on power-down

Data	Power-down Point
0	No power-down
1	Not used (for MR-POWER)
2	Panel-POWER SUPPLY
3	SCAN
4	SCN-5V
5	Y-DRIVE
6	Y-DCDC
7	Y-SUS
8	ADR
9	X-DRIVE
A	X-DCDC
B	X-SUS
C	DIG-DCDC
D	Reservation
E	Reservation
F	Power-down point unidentified

GPW: Obtaining panel white-balance adjustment values

Order	Data	Size	Remarks
1	W/B table currently used	3 bytes	PT1 - PT3
2	Main contrast	4 bytes	0000 - 0511
3	Red contrast of W/B adjustment value	4 bytes	0000 - 0511
4	Green contrast of W/B adjustment value	4 bytes	0000 - 0511
5	Blue contrast of W/B adjustment value	4 bytes	0000 - 0511
6	Main brightness	4 bytes	0000 - 1023
7	Red brightness of W/B adjustment value	4 bytes	0000 - 1023
8	Green brightness of W/B adjustment value	4 bytes	0000 - 1023
9	Blue brightness of W/B adjustment value	4 bytes	0000 - 1023

Note: Ignore the 2-byte checksum at the end.

GS1: Obtaining information on the unit, such as the software version (1)

Order	Data	Size
1	Display data	3 bytes
2	Version of the module microcomputer	4 bytes
3	IC4-MANTA version	4 bytes
4	Sequence version (43VIDEO)	4 bytes
5	Sequence version (43PC)	4 bytes
6	Sequence version (50VIDEO)	4 bytes
7	Sequence version (50PC)	4 bytes
8	Version of the IF microcomputer	4 bytes
9	Version of the main microcomputer	4 bytes
10	IC3-MANTA version	4 bytes
11	Version of the OSD	4 bytes

Note: Ignore the 2-byte checksum at the end.

GS6: Virsion (2)

Order	Data	Size
1	Display data	3 bytes
2 (∗1)	Version of DTV	4 bytes
3 (∗1)	Version of CC	4 bytes
4 (∗2)	PC - CARD	8 bytes
5 (∗2)	TEXT	60 bytes

(∗1) PU ONLY : Order 4,5 ∗∗
(∗2) PE ONLY : Order 2,3 ∗∗

(Reference) GS2: Obtaining information on the status of the unit

Order	Data	Size	Remarks
1	Notifying that the unit is shifting to Standby mode	1 byte	1: OK for shifting to Standby
2	Whether or not the main unit has been adjusted	1 byte	0: Adjusted, 1: Not adjusted
3	With/without backup for adjustment values	1 byte	0: With backup, 1: Without backup
4	Data on power-down	2 bytes	1st byte: 1stPD, 2nd byte: 2ndPD
5	Data on temperature (TEMP1)	3 bytes	0: Normal, 1: SD process completed, 2: In the process of SD warning
6	Abnormality in RST2 (power decrease of DC-DC converter)	1 byte	0: Normal, 1: SD process completed, 2: In the process of SD warning
7	IC4 communication failure	1 byte	0: Normal, 1: SD process completed, 2: In the process of SD warning
8	EEPROM communication failure	1 byte	0: Normal, 1: SD process completed, 2: In the process of SD warning
9	Audio failure	1 byte	0: Normal, 1: SD process completed, 2: In the process of SD warning
10	Volume IC communication failure	1 byte	0: Normal, 1: SD process completed, 2: In the process of SD warning
11	Backup ROM communication failure	1 byte	0: Normal, 1: SD process completed, 2: In the process of SD warning
12	Data on temperature (TEMP1) not obtained	1 byte	0: Normal, 1: SD process completed, 2: In the process of SD warning
13	Operational status of panel protection mechanism	1 byte	0: Protection mechanism not activated, 1: Protection mechanism activated
14	Reservation	9 bytes	**********
15	Hour meter	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute

Notes: • Ignore the 2-byte checksum at the end.
• The data expected to be used for service may be "5. Data on temperature" and "15. Hour meter".

GSD: Obtaining information on shutdown

Order	Data	Size	Remarks
1	Latest SD data	1 byte	0 - 5
2	Latest SD subcategory data	1 byte	0 - 2
3	Data of hour meter for the latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
4	Data on temperature for the latest SD (TEMP1)	3 bytes	000 - 255
5	Second latest SD data	1 byte	0 - 5
6	Second latest SD subcategory data	1 byte	0 - 2
7	Data of hour meter for the second latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
8	Data on temperature for the second latest SD (TEMP1)	3 bytes	000 - 255
9	Third latest SD data	1 byte	0 - 5
10	Third latest SD subcategory data	1 byte	0 - 2
11	Data of hour meter for the third latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
12	Data on temperature for the third latest SD (TEMP1)	3 bytes	000 - 255
13	Fourth latest SD data	1 byte	0 - 5
14	Fourth latest SD subcategory data	1 byte	0 - 2
15	Data of hour meter for the fourth latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
16	Data on temperature for the fourth latest SD (TEMP1)	3 bytes	000 - 255
17	Fifth latest SD data	1 byte	0 - 5
18	Fifth latest SD subcategory data	1 byte	0 - 2
19	Data of hour meter for the fifth latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
20	Data on temperature for the fifth latest SD (TEMP1)	3 bytes	000 - 255
21	Sixth latest SD data	1 byte	0 - 5
22	Sixth latest SD subcategory data	1 byte	0 - 2
23	Data of hour meter for the sixth latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
24	Data on temperature for the sixth latest SD (TEMP1)	3 bytes	000 - 255
25	Seventh latest SD data	1 byte	0 - 5
26	Seventh latest SD subcategory data	1 byte	0 - 2
27	Data of hour meter for the seventh latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
28	Data on temperature for the seventh latest SD (TEMP1)	3 bytes	000 - 255
29	Eighth latest SD data	1 byte	0 - 5
30	Eighth latest SD subcategory data	1 byte	0 - 2
31	Data of hour meter for the eighth latest SD	7 bytes	1st-5th byte: Hour, 6th-7th byte: Minute
32	Data on temperature for the eighth latest SD (TEMP1)	3 bytes	000 - 255

Notes: • Ignore the 2-byte checksum at the end.
• For details, see "Description on shutdown".

• Description of shutdown

Data	Factors of shutdown
0	No abnormality
1	IC4
2	Module microcomputer IIC
3	Abnormality in RST2 (power decrease of DC-DC converter)
4	Panel having high temperature
5	Audio failure (speakers short-circuited)
6	Reservation
7	Reservation
8	Reservation
9	Reservation
A	Reservation
B	Reservation
C	Reservation
D	Reservation
E	Reservation
F	Reservation

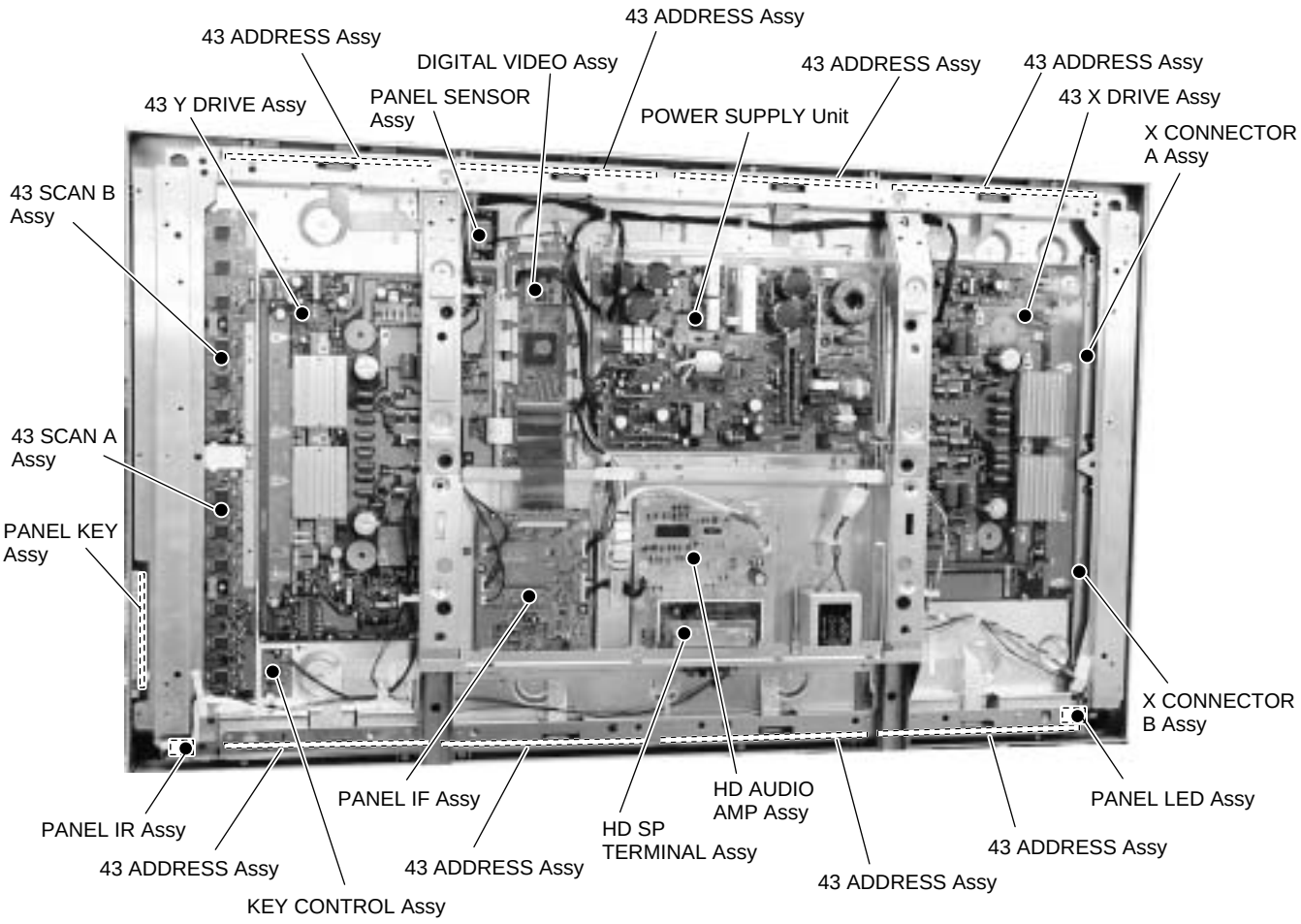
• Module microcomputer IIC: Data on SD subcategory

Data	Factors of shutdown
0	No subcategory
1	EEPROM (DIGITAL VIDEO Assy : IC5206)
2	EEPROM (PANEL IF Assy : IC4002)
3	Volume IC
4	Reservation
5	Reservation
6	Reservation
7	Reservation
8	Reservation
9	Reservation
A	Reservation
B	Reservation
C	Reservation
D	Reservation
E	Reservation
F	Reservation

7. GENERAL INFORMATION

7.1 DIAGNOSIS

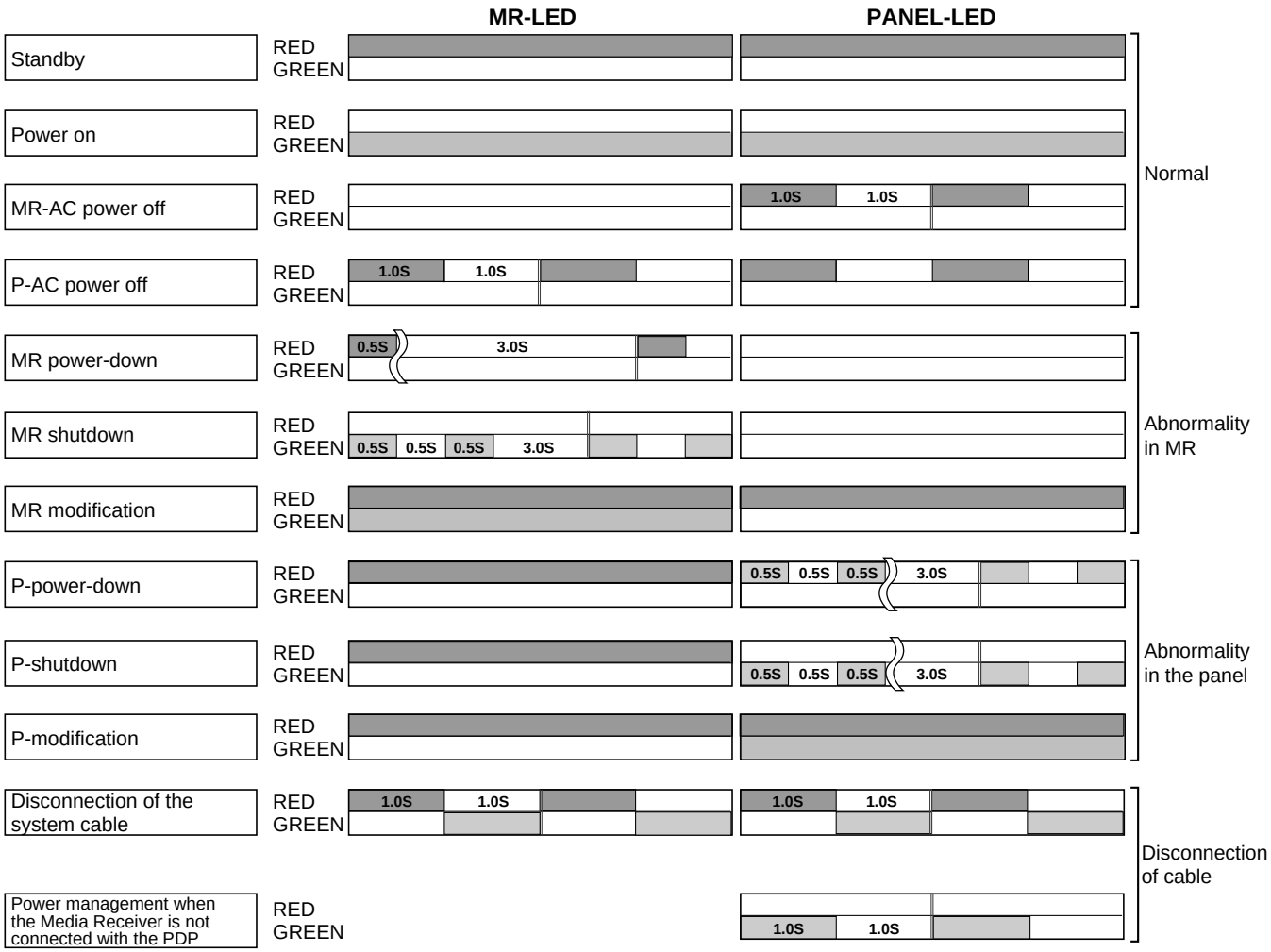
7.1.1 PCB LOCATION



● **Rear view**

7.1.2 DIAGNOSIS OF SHUTDOWN/POWER-DOWN INDICATED BY LEDS

• Operation statuses indicated by LEDs



Note: "P" stands for panel.

: Lit in red

: Lit in green

: Not lit

• Identification of locations having abnormality by the number of times the LEDs flash

■ On Shutdown and power-down

Shutdown

• Operation: When the microcomputer detects any abnormality, it forcibly turns off the unit.
• LED indication: The green LED flashes.

Power-down

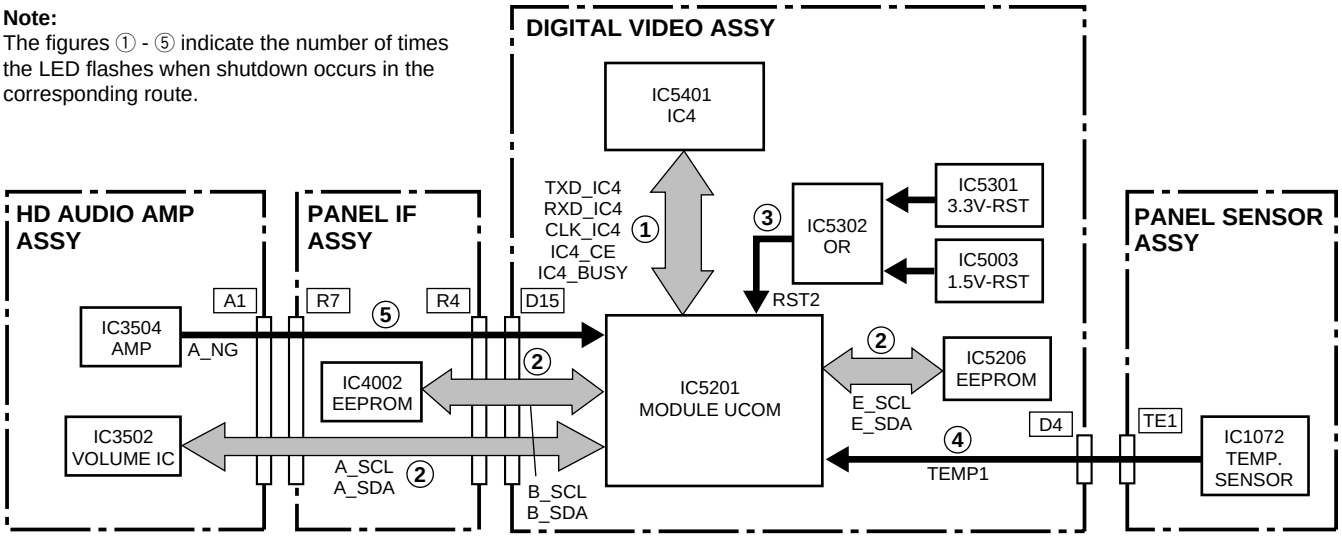
• Operation: When the unit is in emergency status, a protection circuit is activated, and the power is turned off.
• LED indication: The red LED flashes.

Category	MR-LED		PANEL-LED		Content	Unit's operation	Warning indication when the MR is connected
	STB	ON	STB	ON			
SD	Lit			1 time	Communication failure of the panel-drive IC	Immediate shutdown	
	Lit			2 times	Communication failure of the module IIC	Immediate shutdown	
	Lit			3 times	Power decrease of the digital DC-DC converter	Immediate shutdown	
	Lit			4 times	Panel having high temperature	Shutdown 30 seconds after warning	Powering off. Internal temperature too high Check temperature around PDP. Check temperature around media receiver. [SD04]
	Lit			5 times	Audio failure	Shutdown 3 seconds after warning	Powering off. Internal protection circuits activated, Is there a short in speaker cable ? [SD05]
		6 times	Lit		Communication failure of the module microcomputer	Immediate shutdown	
		7 times	Lit		Main 3-wire serial communication in failure	Immediate shutdown	
		8 times	Lit		Communication failure of the main IIC	Immediate shutdown	
		9 times	Lit		Communication failure of the main microcomputer	Immediate shutdown	
		10 times	Lit		Fan in failure	Immediate shutdown	
		11 times	Lit		MR or unit having higher temperature	Shutdown 30 seconds after warning	Powering off. Internal temperature too high Check temperature around PDP. Check temperature around media receiver. [SD11]
		12 times	Lit		Communication failure of the digital tuner	Immediate shutdown	
		13 times	Lit		MR-ASIC power (DC-DC) in failure	Immediate shutdown	
		14 times	Lit		Communication failure of IF-EEPROM	Immediate shutdown	
PD	1 time		Lit		MR power supply	Immediate power-down	
	Lit		2 times		Panel-POWER SUPPLY	Immediate power-down	
	Lit		3 times		SCAN	Immediate power-down	
	Lit		4 times		SCAN-5V	Immediate power-down	
	Lit		5 times		Y-DRIVE	Immediate power-down	
	Lit		6 times		Y-DCDC	Immediate power-down	
	Lit		7 times		Y-SUS	Immediate power-down	
	Lit		8 times		ADDRESS	Immediate power-down	
	Lit		9 times		X-DRIVE	Immediate power-down	
	Lit		10 times		X-DCDC	Immediate power-down	
	Lit		11 times		X-SUS	Immediate power-down	
	Lit		12 times		DIGITAL-DCDC	Immediate power-down	
	Lit		15 times		UNKNOWN ∗	Immediate power-down	

∗ If the unit cannot identify which protection circuit was activated, even if a power-down had been detected, the red LED may flash 15 times.

• Block diagram of the shutdown signal system

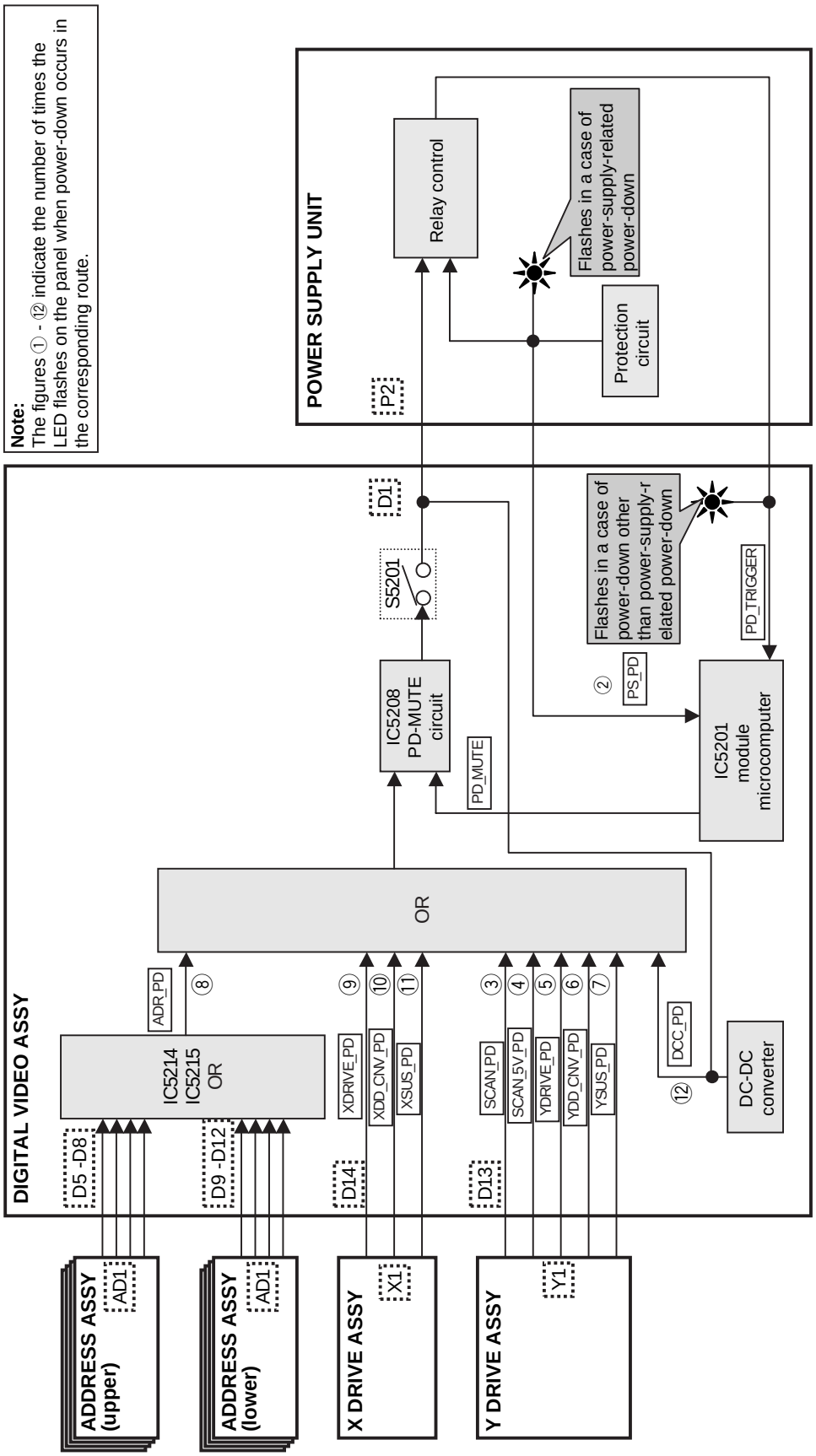
Note:
The figures ① - ⑤ indicate the number of times the LED flashes when shutdown occurs in the corresponding route.



• Diagnosis of shutdown

LED	SD Circuit in Operation	Defective Assy	Reason for Shutdown	Point to be Checked	Possible Defective Part	Remarks
1 time	Communication failure of the panel-drive IC	DIGITAL VIDEO	Communication failure of IC4	IC4 BLOCK, PANEL FLASH BLOCK	IC5401, IC5305	
			Writing failure of IC4			After turning the unit on again, check if the data on the version can be read with the GS1 command.
2 times	Communication failure of the module IIC (Check the shutdown subcategory on the Factory menu.)	DIGITAL VIDEO	Communication failure of the EEPROM (4K)	MODULE UCOM BLOCK	IC5206	
		PANEL IF	Communication failure of the EEPROM (2K)	PANEL IF BLOCK	IC4002	
			Disconnection of cable	CN4009 - CN3501		Check if the cable is disconnected or not securely connected.
		HD AUDIO	Defective volume IC	HD AUDIO AMP Assy	IC3502	
			Defective 114-pin FPC	CN4004 - CN5001	ADY1081	Check if the 114-pin FPC is broken or not securely connected.
3 times	Power decrease of DIGITAL-DC-DC	DIGITAL VIDEO	Defective DC-DC converter	DIGITAL DD CON BLOCK	U5601	Check if 3.3 V, 2.5 V, and 1.5 V are activated.
			Defective RST IC	PANEL FLASH BLOCK	IC5301, IC5302, IC5303	
		POWER SUPPLY	No startup of 12 V			
4 times	Panel having higher temperature	DIGITAL VIDEO	Cable disconnected	CN5202 - CN1071		
			Panel having higher temperature	Surrounding temperature		Shutdown occurs when the sensor temperature becomes 77°C or more (PDP-434P) or 83°C or more (PDP-504P).
5 times	Audio failure		Speaker short-circuited	Speaker terminals		Check if the speaker cables are in contact with the chassis, etc.
		HD AUDIO	Defective AMP IC	HD AUDIO AMP ASSY	IC3504	
		HD AUDIO	Disconnection of cable	CN4009 - CN3501		Check if the cable is disconnected or not securely connected.

• **Block diagram of the power-down signal system**



• Power-down diagnosis (defective points)

	PD Circuit in operation	Defective Assy	Reason for Power-down	Point to be Checked	Possible Defective Part	Remarks
1	MR POWER					If the elapsed time from relay-on until the LED in the power supply unit lights is about 2-4 seconds, the defective assembly may be the 43 X or Y DRIVE.
2	POWER	POWER SUPPLY Unit				
		43 X DRIVE Assy	VSUS UVP	X SUS BLOCK	IC1203 - IC1207 (mask module)	
		43 Y DRIVE Assy	VSUS UVP	Y SUS BLOCK	IC2303 - IC2307 (mask module)	
3	SCAN	43 SCAN A, B Assy or Y 43 DRIVE Assy	VH UVP	SCAN IC	SCAN IC	
			VH UVP	VH DC/DC	IC2401, IC2402, IC2410, L2401	
			Disconnection of cable detected	CN2001, CN2301		
4	SCN-5V	43 SCAN A, B Assy or 43 Y DRIVE Assy	Disconnection of cable detected	CN2101, CN2102		
			IC5V UVP	SCAN IC, IC5V DC/DC Y SUS BLOCK	SCAN IC, Q2401, Q2402, IC2304, IC2309	
			IC5V OVP	IC5V DC/DC	IC2403, IC2411	
5	Y-DRIVE	43 Y DRIVE Assy	+16.5V OCP	Y SUS BLOCK	IC2303 - IC2307 (mask module), IC2301, IC2304, R2309	
6	Y-DCDC	43 Y DRIVE Assy	VOFS UVP	VOFS DC/DC	IC2404, IC2412, Q2404, Q2407	
			VOFS OVP	VOFS DC/DC	IC2404, IC2412	
			VH OVP	VH DC/DC	IC2402, IC2410	
7	Y-SUS	43 Y DRIVE Assy	Power-down caused by detection of middle-point voltage	Y RESONANCE BLOCK	Q2202, Q2203, Q2214, Q2205, Q2206, Q2208, Q2209, Q2211, Q2212, IC2201, IC2202, Control signal series resistors	
		DIGITAL VIDEO Assy	Power-down caused by detection of middle-point voltage	DIGITAL VIDEO Assy	IC5401, Control signal series resistors	
8	ADRS	43 ADDRESS Assy	Disconnection of cable detected	CN1501		
			Power-down caused by detection of a power surge	ADR RESONANCE BLOCK	R1631, Q1601, D1602	
			Power-down caused by detection of middle-point voltage	ADR RESONANCE BLOCK	Q1602, C1609, D1606, D1607	
9	X-DRIVE	43 X DRIVE Assy	Disconnection of cable detected	CN1001, CN1201		
			+16.5V OCP	X SUS BLOCK	IC1203, IC1207 (mask module), IC1204, IC1206, R1230	
			VRN OCP	X SUS BLOCK	Q1205, R1226, R1251	
10	X-DCDC	43 X DRIVE Assy	VRN OVP	VRN DC/DC	IC1403, IC1404	
			VRN UVP	VRN DC/DC	IC1402, IC1403, IC1404	
				X SUS BLOCK	Q1205, R1226, R1251	
11	X-SUS	43 X DRIVE Assy	Power-down caused by detection of middle-point voltage	X RESONANCE BLOCK	Q1102, Q1103, Q1114, Q1105, Q1106, Q1108, Q1109, Q1111, Q1112, IC1101, IC1102, Control signal series resistors	OVP : **O**ver **V**oltage **P**rotection UVP : **U**nder **V**oltage **P**rotection OCP : **O**ver **C**urrent **P**rotection
		DIGITAL VIDEO Assy	Power-down caused by detection of middle-point voltage	DIGITAL VIDEO Assy	IC5401, Control signal series resistors	
12	DIG-DCDC	DIGITAL VIDEO Assy	DCDC +3.3V, +1.5V OVP	DC DC CONVERTER BLOCK	U5601 (DC DC CONVERTER Module)	

7.1.3 DIAGNOSIS WITH THE AID OF FACTORY MODE

• Diagnosis with the aid of Factory mode

When the Media Receiver is connected, the power-down and shutdown logs can be referred to with OSD. Only the items useful when servicing the PDP-434PU/PDP-504PU are described here.

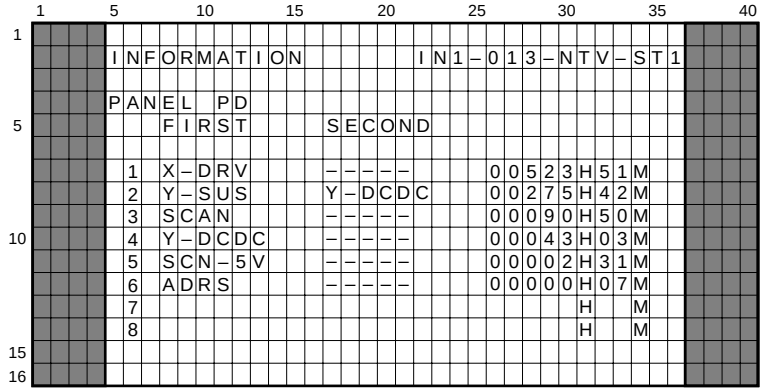
■ How to enter Factory mode using the remote control unit

Please refer to the technical documentation (Service knowhow).

■ Power-down log (INFORMATION-PANEL PD)

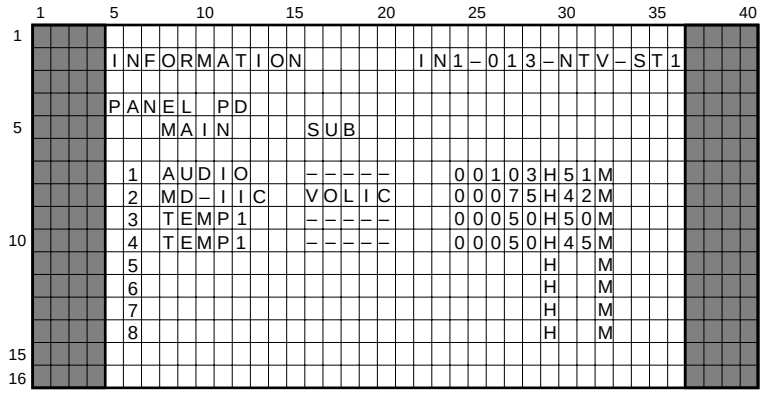
The last 8 power-down records are held, with the latest power-down displayed at the top. In the FIRST column, the location where the PD circuit was activated first (location indicated by flashing of the LED during power-down) is indicated, and in the SECOND column, the location where the PD circuit was activated second is indicated.

Note: There may not be a SECOND PD.



■ Shutdown log (INFORMATION-PANEL SD)

The last 8 shutdown records are held, with the latest shutdown displayed at the top. If a shutdown occurred because of "MD-IIC" (communication failure of the module microcomputer IIC), the subcategory is indicated to inform you of with which device the microcomputer was in the process of communicating when a failure occurred.



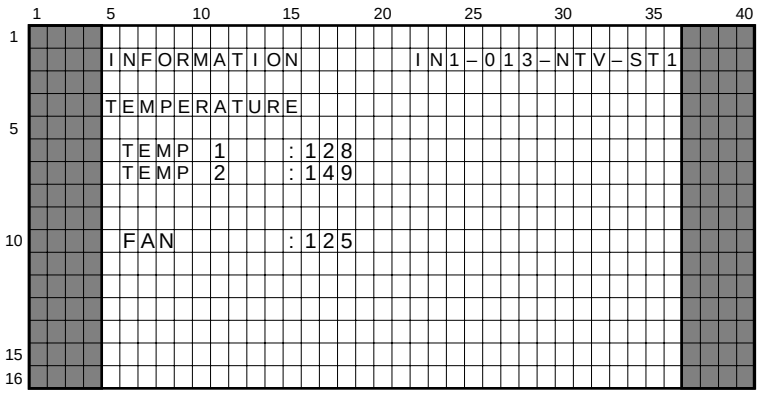
[Data on MD-IIC subcategories]

OSD	Defective communication part
EROM4K	IC5206: Module microcomputer
EROM2K	IC4002: EEPROM for backup
VOLIC	IC3502–Volume IC

■ Data on temperature (INFORMATION-TEMPERATURE)

The data on the current temperatures are displayed.
The temperature at the PANEL SENSOR ASSY of the PDP-434PU/PDP-504PU is indicated as the TEMP 1 value (000-255), which should be converted using the following formula:
Current temperature (°C) ≒ 0.65 × TEMP 1 value - 52

Note: Shutdown caused by high TEMP 1 value
PDP-434P: TEMP 1 value > 200 (≒ 77°C)
PDP-504P: TEMP 1 value > 209 (≒ 83°C)



Note: To update the data on temperature, use the Left and Right keys on the remote control unit.

[PANEL IF Assy-related diagnosis]

Symptom	Error indication	What is happening? (defective soldering, data-transmission error, etc.)	Which pin must be checked? (What is to be checked?)	PD or SD? (How many times does the LED flash?)	In which condition does the symptom tend to appear?
No power		Incomplete connection of the FPC (114-pin) between the PANEL IF and DIGITAL assemblies. Incomplete connection between the POWER SUPPLY and PANEL IF assemblies.			
Power interrupted		The connection of the system cable may have been slightly loose.			
No display, abnormal display (abnormal LED)	Alternate flashing of the red and green LEDs	Incomplete connection of the system cable		Shutdown occurs 30 seconds after	
	Both the red and green LEDs lit	Incomplete connection between the TRAP switch and the PANEL IF Assy. Rear case opened	Check if Pin 1 of the CN4006 is low.		
	Green LED flashes twice	Incomplete connection between the AUDIO and PANEL IF assemblies		SD after the green LED flashes twice	
	Green LED flashes four times.	Panel having high temperature. Incomplete connection between the PANEL SENSOR and DIGITAL assemblies.		Shutdown occurs 30 seconds after the green LED flashes four times alerting of high-temperature operation	
	Defective lighting	Incomplete connection between the LED and PANEL IF Assy			
No key operation effective		Incomplete connection between the PANEL KEY and KEY CONTROL assemblies	Check if a pulse is output from Pin 2 of the CN4852 when the KEY button is pressed.		Vibration added
Operation of the remote control unit is not effective		Incomplete connection between the KEY CONTROL and PANEL IF assemblies	Check if a pulse is output from Pin 5 of the CN4010 when the KEY button is pressed.		
		Incomplete connection between the PANEL IR and PANEL IF assemblies	Check if a pulse is output from Pin 3 of the CN4010 when the KEY button is pressed.		
Sound interrupted		Incomplete connection between the AUDIO and PANEL IF assemblies			

[DIGITAL VIDEO Assy-related diagnosis]

Symptom	What is happening? (defective soldering, data-transmission error, etc.)	Possible defective part	Which pin must be checked? (What is to be checked?)
Abnormality in a one-eighth area of the screen		IC5401 (40-pin connector) of the ADDRESS Assy	Check if an abnormal area in the screen changes when the 40-pin FPC is replaced.
Abnormal screen	Data of every other dot are abnormal.	Incomplete connection of the 114-pin FPC	

7.1.4 CANCELING DETECTION BY THE TRAP SWITCH

• Canceling detection by the TRAP switch

Outline: For video data transmission from the Media Receiver to the plasma display, digital signals are used. Therefore, this unit adopts the HDCP (High-bandwidth Digital Content Protection) system for copyright protection. This unit is also provided with a detection switch (TRAP switch) that will prohibit the unit from being turned on again if the rear case of the unit is opened, in order to prevent the panel technology from being leaked out.

Function: To deactivate the detection of the TRAP switch

Purposes: 1. During production of this unit, adjusting with the rear cover opened is possible.
2. During servicing or repairing, diagnoses of the assemblies are possible while the power is on.

Methods: For setting, use RS232C commands:
TSN: Ignore the monitoring of the switch
CTM: Clear the detection log of the switch
TSY: Reactivate monitoring of the switch

Notes:

- The TRAP switch is located on the chassis (see Fig. below).
- Once rear case opening is detected, send the TSN and CTM commands.
- Because the TSN command is not stored in memory, monitoring of the switch can be reactivated by turning the unit off then back on.
- The same setting is possible using the Factory menu.
- Because the output of the DVI receiver is controlled by the physical setting of the TRAP switch, if the TRAP switch is set to OPEN, the DVI signal cannot be output even if the TSN command is sent.
- When the Media Receiver is connected, detection by the TRAP switch can be canceled by entering Factory mode.

● **How to enter Factory mode using the remote control unit**

Please refer to the technical documentation (Service knowhow).

● **How to clear the detection log of the TRAP switch**

In the INITIALIZE layer, hold the OSD key on the remote control unit pressed for at least 3 seconds.

● **After a power-down, to cancel detection of the TRAP switch using only the remote control unit, follow the procedures below.**

First, fix the TRAP switch to its depressed position. Set the drive ON/OFF switch in the DIGITAL VIDEO Assy to OFF,
Then enter the Factory mode. Press the MUTE key four times, then hold the OSD key pressed for at least 3 seconds. Set the AC switch on the panel to OFF. The log is also cleared. Then set the drive ON/OFF switch to ON.

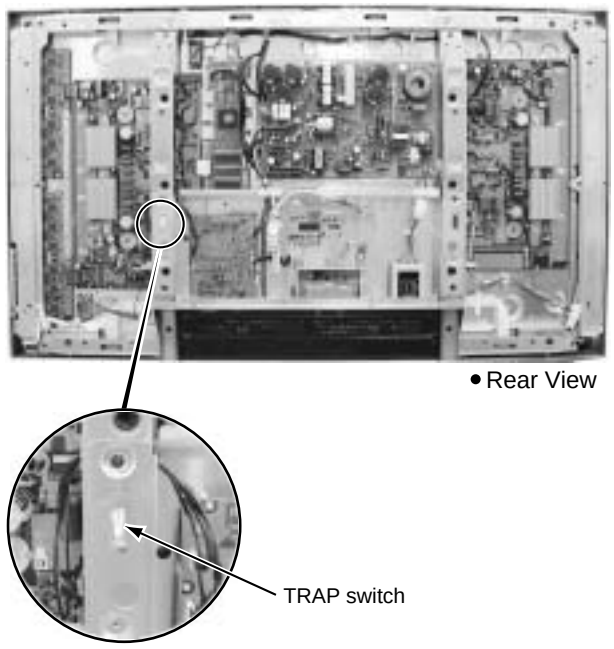
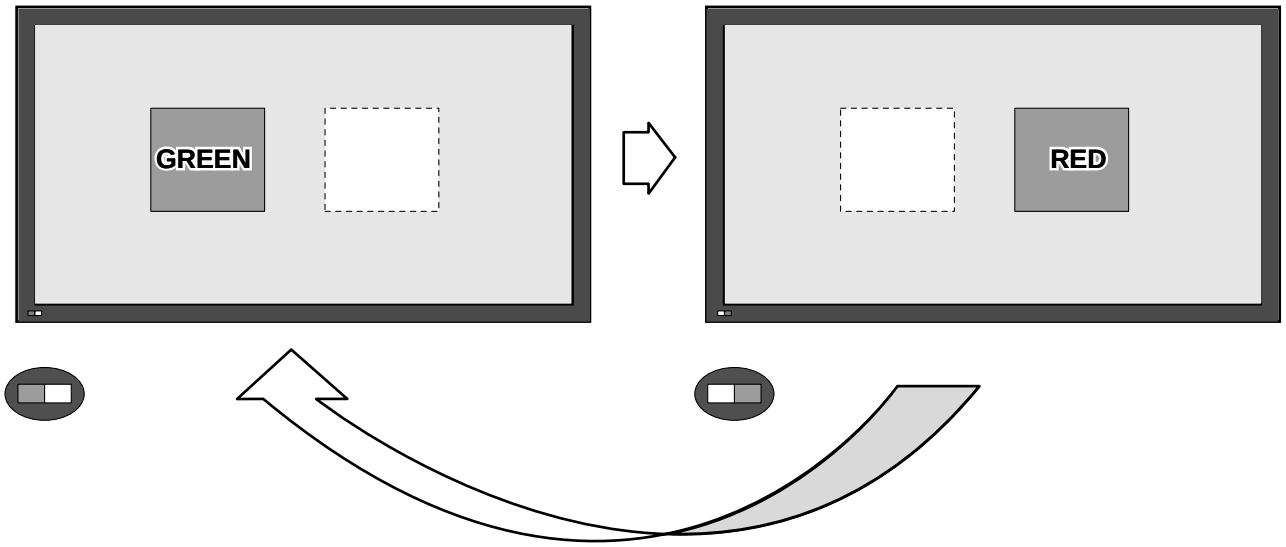


Fig. TRAP switch

7.1.5 OPERATION WHEN THE MEDIA RECEIVER IS NOT CONNECTED

As the connection conditions of the system cables (MDR cable, DVI cable) are usually detected, if no connection, such as cable disconnection, is detected, a warning indication (alternate flashing of the red and green areas) is displayed on the mask screen, and the red and green LEDs flash alternately. Then after about 30 seconds, the power is automatically turned off.

Note: Only when the power is turned on again, a warning indication on the mask screen restarts. During standby, only the red and green LEDs flash alternately.



Alternate flashing at intervals of about 1 second

To operate the panel without the Media Receiver, there are the following two ways:

1. Operation-without-the-Media-Receiver mode

Input the "SCN" RS232C command. The status of the LEDs changes to that in normal operation mode.

Note: Turning the AC switch to OFF then ON also maintains this mode. However, once the unit is connected with the Media Receiver using the MDR cable, this mode is automatically canceled.

2. DVI mode

Turn the unit on while PC and DVI SG signals are being input with only the DVI connecter connected. After a warning is displayed for about 5 seconds, the unit is ready to display the screen of the input signal. (Green LED lit)

Notes:
- Although the output from XGA (43 inch) and WXGA (50 inch) can be input to the unit, this is not a mode open to general users. (With some signals, errors such as power-down may occur.)
- If a DE signal from the SG is not input during DVI mode, the green LED flashes (at intervals of 2 sec) for about 8 seconds, then the unit shifts to Power Management mode (the green LED lights).

7.1.6 TEMPERATURE-COMPENSATION FUNCTION OF THE DRIVE-SYSTEM VOLTAGE

Function: To control the DRIVE-system voltage according to the temperature (Temperature compensation functions such that the voltage is lowered on the lower-temperature side and the voltage becomes higher on the higher-temperature side.)

Purpose: For improving the yield by compensating for the temperature characteristics of the panel

Note: Temperature compensation is performed only for the VSUS voltage, and not for the VOFS voltage. This compensation is controlled by the software.

7.1.7 POWER ON/OFF FUNCTION FOR THE LARGE-SIGNAL SYSTEM

Function: Only the power for the small-signal system (16.5 V, 12 V, and 6.5 V) is on, and the power for the large-signal system (VSUS, VADR) is off.

Usage: 1. Use when only an operational check for the small-signal system is required, such as when making repairs.
2. Use when rewriting of a program for each microcomputer is required.

Methods: 1 Set the slide switch (S5201) on the DIGITAL VIDEO Assy to its upper position (see Fig. below).
2. Send the "DRF" RS232C command to turn the large-signal system off.
3. Send the "DRN" RS232C command to turn the large-signal system on.

Notes:
- As the unit enters Power-Down and Muting On mode when Methods 1 and 2 are performed, and power-downs other than those caused by the power (PS_PD) and DC-DC-converter (DIGITAL_DC-DC) circuits are not activated.
- If the slide switch is set from OFF to ON while the power is on, a power-down will occur. Be sure to turn the power off before switching the slide switch.

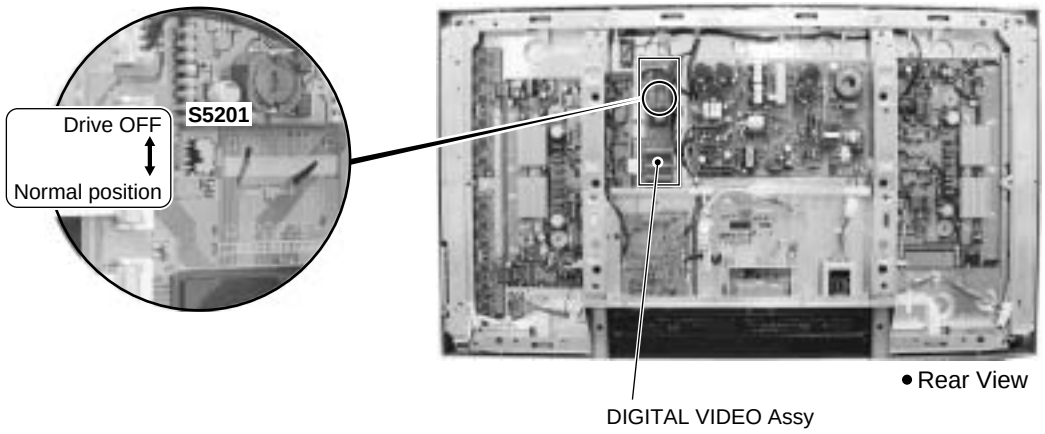


Fig. Drive OFF switch

7.1.8 BACKING UP THE ADJUSTMENT VALUES FOR THE MAIN UNIT

Outline

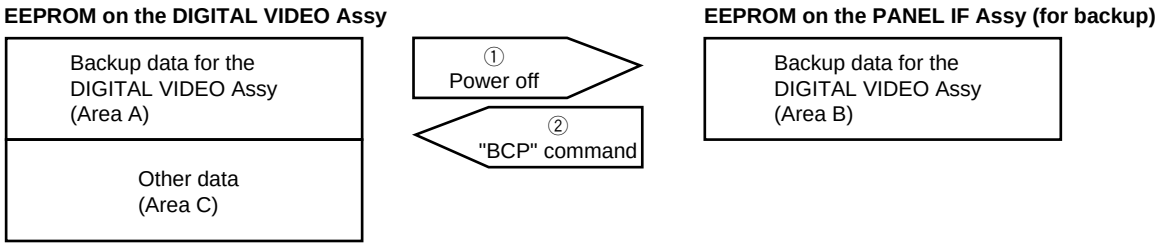
The data on the adjustment values for the main unit are stored in an EEPROM (IC5206, 4 kbits) on the DIGITAL VIDEO Assy. Part of the data (area A in the figure below) are automatically copied to an EEPROM (IC4002, 2 kbits) mounted on the PANEL IF Assy for backup. When the DIGITAL VIDEO Assy is replaced, the backup data on the adjustment values for the main unit stored in the PANEL IF Assy can be copied to the new DIGITAL VIDEO Assy, thus enabling you to omit newly performing adjustments on the main unit. The logs for the product (power-down log, etc.) can also be copied.

Data to be backed up in the digital EEPROM (area A)

- Margin adjustment values (Vsus, Vofset)
- Power upper-limit adjustment value (ABL)
- PANEL white-balance adjustment values
  (PANEL-R HIGH, PANEL-G HIGH, PANEL-B HIGH, PANEL-R LOW, PANEL-G LOW, PANEL-B LOW)
- Drive waveform adjustment values
  (X-SUS-U1, X-SUS-U2, X-SUS-D1, X-SUS-D2, Y-SUS-U1, Y-SUS-U2, Y-SUS-D1, Y-SUS-D2, Y-SUS-D3, Y-SUS-D4)
- Hour meter
- Pulse meter
- Number of times the power has been turned on
- PD/SD logs

Basic flow of automatic backup

Using a keyword, the data in areas A and B are judged as to whether they have been adjusted or not, then copying is performed.

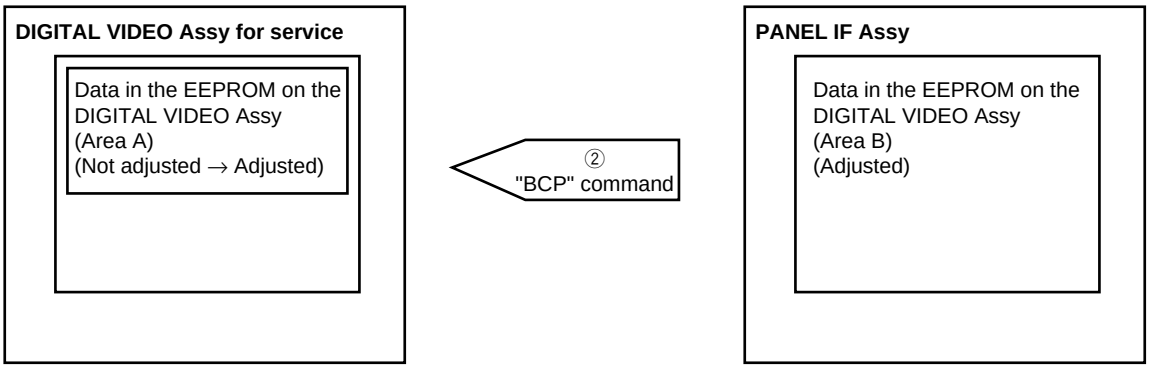

EEPROM on the DIGITAL VIDEO Assy
Backup data for the DIGITAL VIDEO Assy (Area A)
Other data (Area C)
①
Power off
②
"BCP" command
EEPROM on the PANEL IF Assy (for backup)
Backup data for the DIGITAL VIDEO Assy (Area B)

① The keyword on the DIGITAL VIDEO Assy is checked when the power is turned off, and if it is "adjusted", automatic backup is performed.
② If the keyword on the PANEL IF Assy (Area B) is "adjusted," copying can be performed with the "BCP" RS232C command.

Actual automatic backup operations

1. When the DIGITAL VIDEO Assy is replaced with an Assy for service

Changing of keywords is not required. Replace the DIGITAL VIDEO Assy with an Assy for service, and send the "BCP" RS232C command. Thus, the backup data in the EEPROM on the PANEL IF Assy are copied to the EEPROM on the DIGITAL VIDEO Assy for service.


DIGITAL VIDEO Assy for service
Data in the EEPROM on the DIGITAL VIDEO Assy (Area A) (Not adjusted → Adjusted)
②
"BCP" command
PANEL IF Assy
Data in the EEPROM on the DIGITAL VIDEO Assy (Area B) (Adjusted)

2. When a repaired DIGITAL VIDEO Assy is mounted on another unit (reuse of the repaired DIGITAL VIDEO Assy)

The keyword of the DIGITAL VIDEO Assy to be reused must be changed to "not adjusted" using the "UAJ" RS232C command.

Note 1: If a repaired DIGITAL VIDEO Assy is mounted in another unit (Unit 2) without this change of keyword, and the power to the unit 2 is turned off, the data in force before the repair of the DIGITAL VIDEO Assy will be copied to Area B of the PANEL IF Assy of Unit 2, overwriting the data necessary for Unit 2. Once overwritten, the original data will not be restored.

3. When a repaired DIGITAL VIDEO Assy is mounted on the original unit (reuse of the repaired DIGITAL VIDEO Assy)
Changing of keywords is not required. After the repaired DIGITAL VIDEO Assy is mounted in the original unit, the unit can operate with its latest adjustment values.

4. When both the DIGITAL VIDEO Assy and PANEL IF Assy are simultaneously replaced with other assemblies
The automatic backup function of this unit will not work properly.

Note 2: Readjustment of the main unit is required.
Note 3: After readjustment of the main unit, send the "FAJ" RS232C command to change the keyword of the DIGITAL VIDEO Assy to "adjusted." Thus, when the unit is turned off, automatic backup of adjustment data is performed properly.
Note 4: If readjustment of the main unit is totally impossible, it can be omitted by installing the EEPROM (IC5206, 4 kbits) originally mounted on the DIGITAL VIDEO Assy for service.

■ Miscellaneous

If the white balance (W/B) value is largely shifted because of aging, etc., W/B adjustment is required. (As this may be a rare case, the adjustment procedures are described below, just for your reference.

[W/B-adjustment procedures]

The W/B adjustment can be performed with the RS232C commands with the Media Receiver not connected to this unit. The GGF1475 special communication tool and a Minolta CA-100 color difference meter are required.

① Enter Operation-without-the-Media-Receiver mode with the "SCN" RS232C command.

② Set the keyword for the DIGITAL VIDEO Assy to "not adjusted" with the "UAJ" RS232C command.

③ Obtain the current adjustment values in the two adjustment tables (see "6.2.1 RS232C commands").
- Shifting to Table 1: Send the "M51" and "F60" commands. Obtaining the adjustment values: Send the "GPW" command.
- Shifting to Table 2: Send the "M51" and "F75" commands. Obtaining the adjustment values: Send the "GPW" command.

④ Make settings for various functions.
Send the "PPN," "SDN," "SPN," and "WAY" commands.
Note: After adjustment, when the POWER switch is set to OFF, these settings will be reset to the initial values.

⑤ For each table, set the brightness.
- Adjustment in Table 1: After sending the "F60" command, perform adjustment.
- Adjustment in Table 2: After sending the "F75" command, perform adjustment.

For each table, change the RGB parameters so that the values measured using a Minolta color difference meter (CA-100) become as indicated below. In this case, any one of PRH, PGH, or PBH must be set to 256.

	Left side of Mask H	Right side of Mask H
x	–	284
y	–	292

"PRH***" : 000 - 511
"PGH***" : 000 - 511
"PBH***" : 000 - 511

⑥ Check after adjustment
- Shifting to Table 1: Send the "F60" command. Obtaining the adjustment values: Send the "GPW" command.
- Shifting to Table 2: Send the "F75" command. Obtaining the adjustment values: Send the "GPW" command.

Check that the adjustment data have been changed.

⑦ Change the keyword for the DIGITAL VIDEO Assy to "adjusted" by sending the "FAJ" RS232C command.
Note: Use a Minolta CA-100 color difference meter or the equivalent for measurement. Otherwise, the specifications of the product cannot be assured.

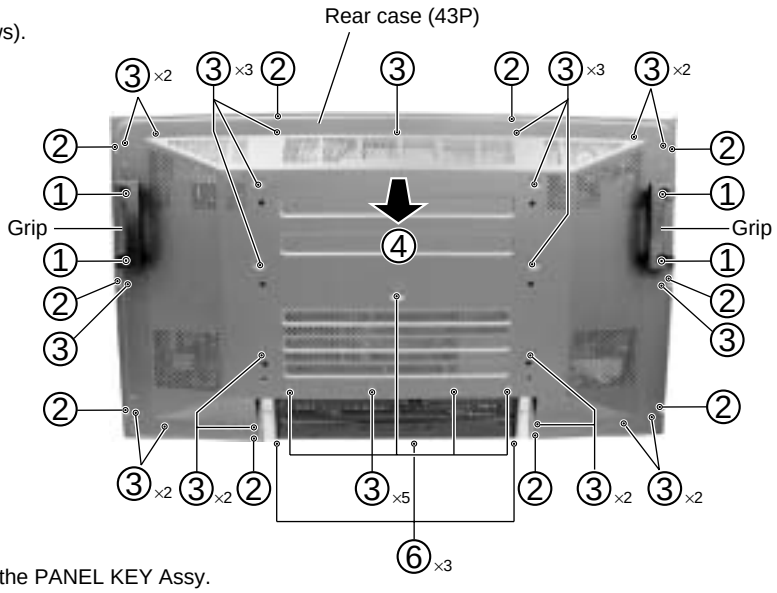
[Diagnosis of abnormalities other than shutdown and power-down]

Symptom	Defective Assy	Possible Cause	Check Point	Possible Defective Part	Remarks
No power (both red and green LEDs unlit)		Cable disconnection	CN4001		Check if the connection between the POWER SUPPLY and PANEL IF assemblies is properly made.
No power (green LED not lit)		Defective 114-pin FPC	CN4004 - CN5001	ADY1081	Check if the FPC is broken or not securely inserted.
No power (both red and green LEDs lit)		Detection by the TRAP switch	CN4006		Check if the TRAP switch is properly set. (See "7.1.4 Canceling detection of the TRAP switch".)
		Defective TRAP switch		ASG1089	Check if the unit works properly when detection of the TRAP switch is canceled. (See "7.1.4 Canceling detection of the TRAP switch.")
The power is (sometimes) interrupted.		Defective system cables	CN4002, CN4003		Check if the system cables are securely connected. (See "7.1.5 Operation when the Media Receiver is not connected.")
The power is interrupted, and the red and green warning indications appear on the screen.		System cables not connected			Check connection of the system cables. (See "7.1.5 Operation when the Media Receiver is not connected.")
Key input not effective		Cable disconnection	CN4801 - CN4851	ADD1225	Check if the FPCs are properly connected. Check if imparting vibration to the unit affects key inputs. Check if a pulse is output when the key corresponding to Pin 2 of the CN4852 is pressed.
		Cable disconnection	CN4852 - CN4010		Check if the cables are disconnected or not securely connected. Check if a pulse is output when the key corresponding to Pin 5 of the CN4010 is pressed.
	KEY CONTROL	Defective KEY SCAN IC	KEY CONTROL Assy	IC4851	Check if a pulse is output when the key corresponding to Pin 2 of the CN4852 is pressed.
Remote control unit not effective		Cable disconnection	CN4901 - CN4010		Check if the cables are not connected or securely connected.
					Check if the FPCs are properly connected.
	PANEL IR	Defective infrared receiver	PANEL IR	U4901	Check if a pulse is output when the key corresponding to Pin 3 of the CN4010 is pressed.
Abnormality in a one-eighth area of the screen	DIGITAL VIDEO	Defective IC4	IC4 BLOCK	IC5401	Check if an abnormal area in the screen changes when the FPC connected to the address corresponding to the abnormal area is replaced with the one corresponding to the next address.
	ADDRESS				Check that an abnormal area in the screen does not change when the FPC connected to the address corresponding to the abnormal area is replaced with the one corresponding to the next address.
Abnormal screen (Data of every other dot are abnormal)		Defective 114-pin FPC	CN4004 - CN5001	ADY1081	Check if the FPC is broken or not securely inserted.

7.1.10 DISASSEMBLY

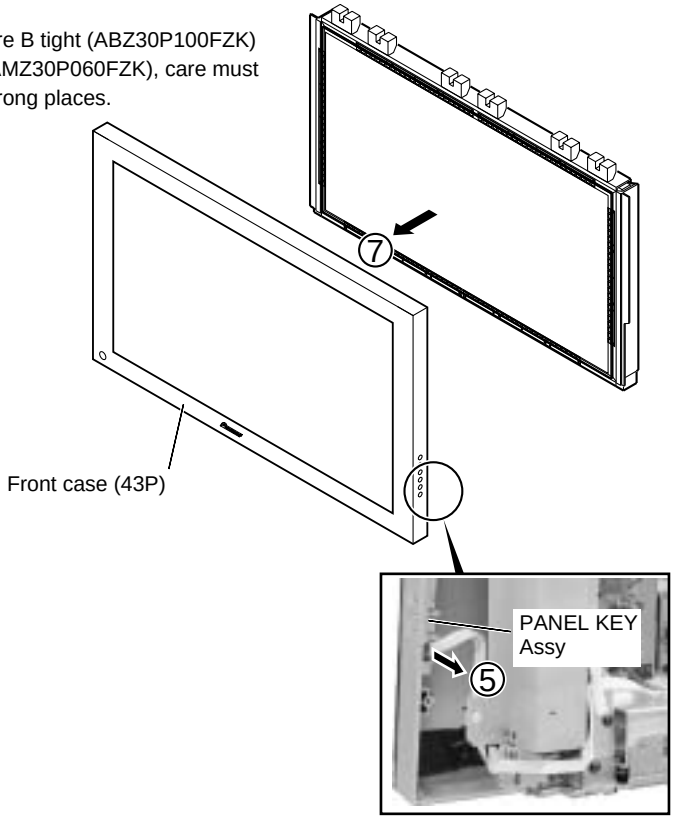
1 Rear case (43P), Front case Assy (43P)

① Remove the grip by removing the four screws.
② Remove the ten screws (B tight).
③ Remove the twenty six screws (M screws).
④ Remove the rear case (43P).

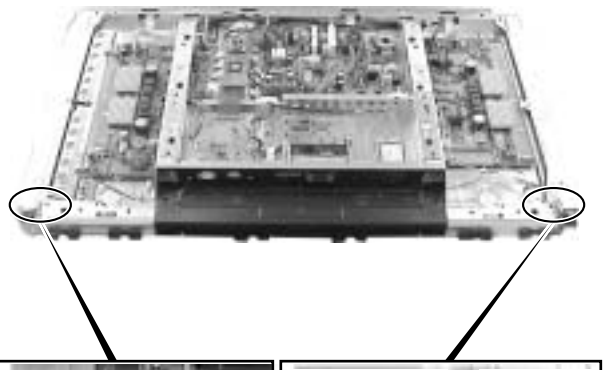


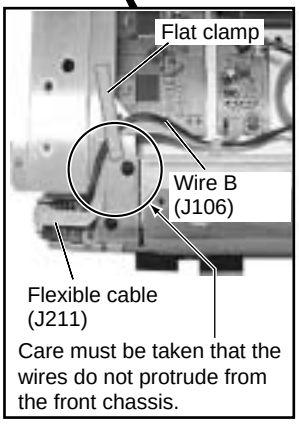
⑤ Remove the flexible cable (J211) from the PANEL KEY Assy.
⑥ Remove the three screws (B tight).
⑦ Remove the front case (43P).

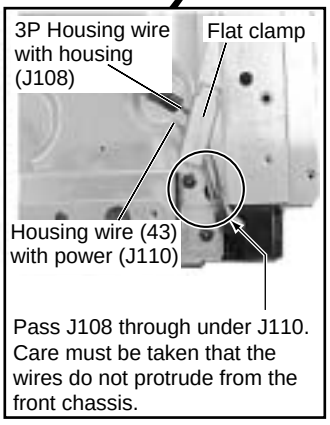
Note:
As the screws used for the front case are B tight (ABZ30P100FZK) and other screws used are M screws (AMZ30P060FZK), care must be taken not to use the screws in the wrong places.



• **Notes when reassembling the rear case (43P)**






3P Housing wire with housing (J108)
Flat clamp
Housing wire (43) with power (J110)
Pass J108 through under J110. Care must be taken that the wires do not protrude from the front chassis.

2 Front chassis VL Assy (43), Front chassis VR Assy (43)

① Remove the front case, then remove the screw that secures the IR holder.

② Remove the nylon rivet, then remove the IR holder.

③ Remove the flat clamp, then remove the wires.

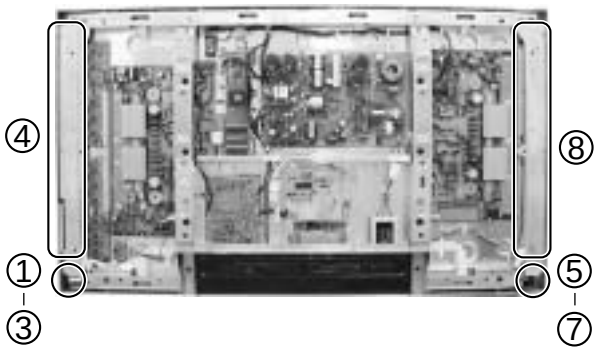
④ Remove the front chassis VL Assy (43), by removing the 5 screws (M screws).

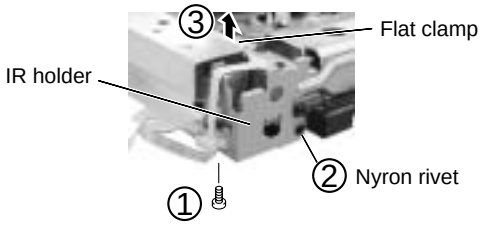
⑤ Remove the PANEL LED Assy, by removing the screw (B tight). If the screw is not removed, the connectors on the PANEL LED Assy may be damaged.

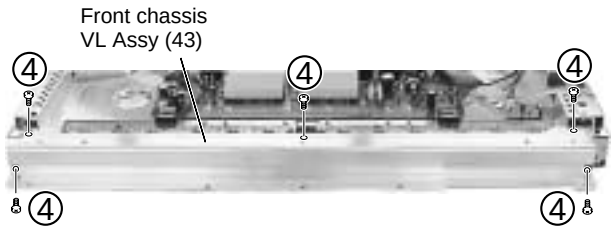
⑥ Remove the switch holder, by removing the screw (M screw).

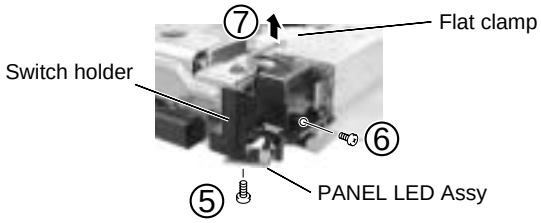
⑦ Remove the thin clamp, then remove the wires.

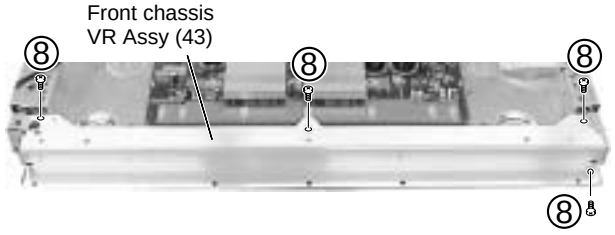
⑧ Remove the front chassis VR Assy (43), by removing the 4 screws (M screws).





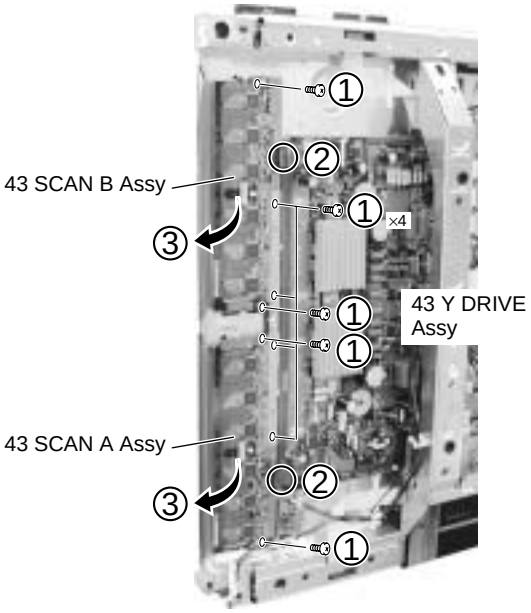




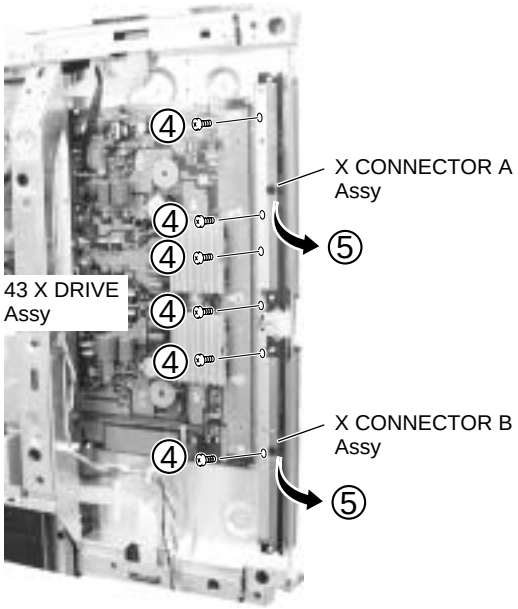


3 43 SCAN A, B, X CONNECTOR A and B Assemblies

① Remove the 8 screws (M screws).
② Remove the 2 pin connectors.
③ Remove the 43 SCAN A and B Assemblies.

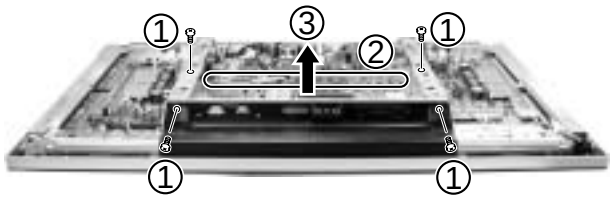


④ Remove the 6 screws (M screws).
⑤ Remove the X CONNECTOR A and B Assemblies.

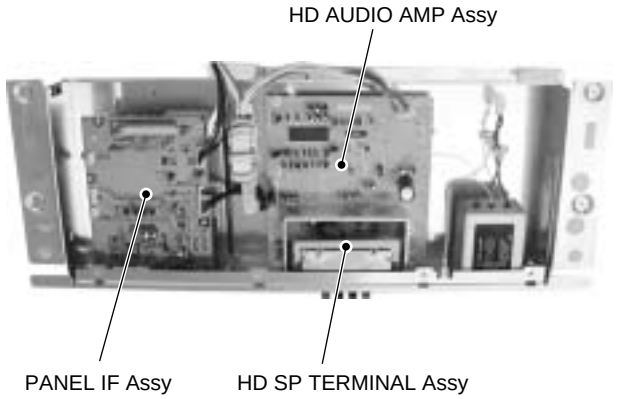


4 Multi base section

① Remove the 4 screws (M screws).
② Remove the some connectors.
③ Remove the multi base section.



• PCB Location for multi base section



7.2 IC INFORMATION

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

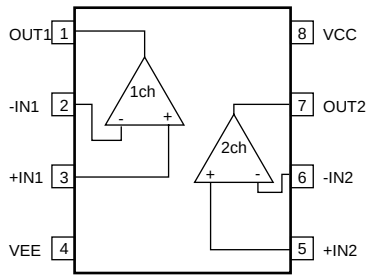
● **List of IC**

BA10393F, BA10358F, BA8274F, NJM2195L, MBM29PL160BD, SII169CTG100, STK795-510, STK795-511, LA4625, M30626FHPGP, PD5856A

■ BA10393F (43 X DRIVE ASSY: IC1103) (43 Y DRIVE ASSY: IC2211)

• Comparator IC

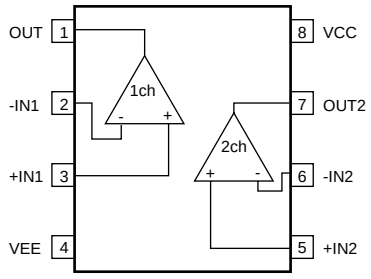
● **Pin Arrangement (Top view) / Block Diagram**



■ BA10358F (43 Y DRIVE ASSY: IC2406)

• OP-AMP IC

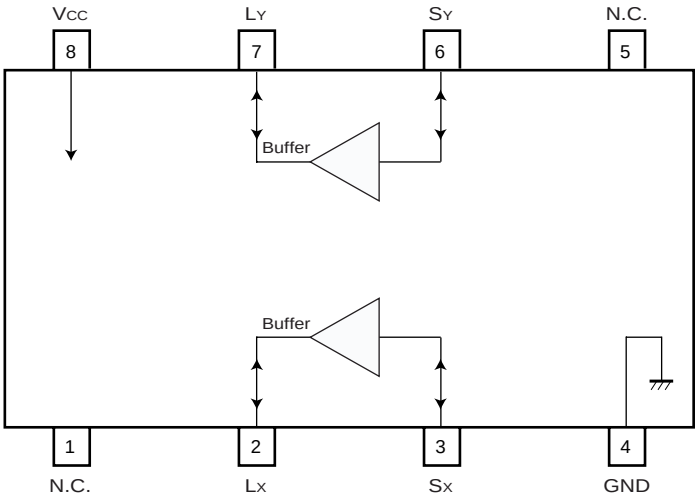
● **Pin Arrangement (Top view) / Block Diagram**



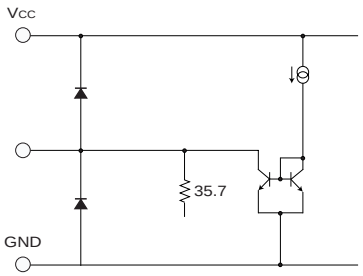
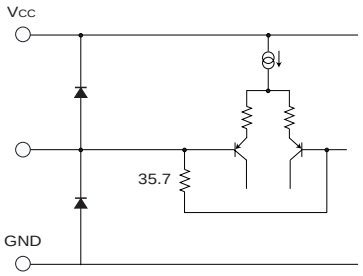
■ BA8274F (PANEL IF ASSY: IC4206)

• I^2C Bus Interface IC

● Block Diagram



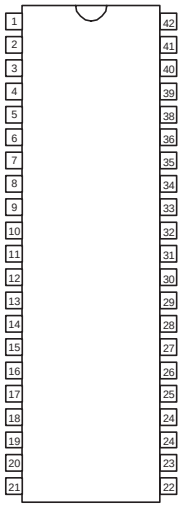
● Pin Function

Pin No.	Pin Name	Equivalent Circuit	Pin Function
2 7	LX LY		Buffer output
3 6	SX SY		Buffer input
4	GND	—	Ground
8	VCC	—	Power supply

NJM2195L (HD AUDIO AMP ASSY: IC3501)

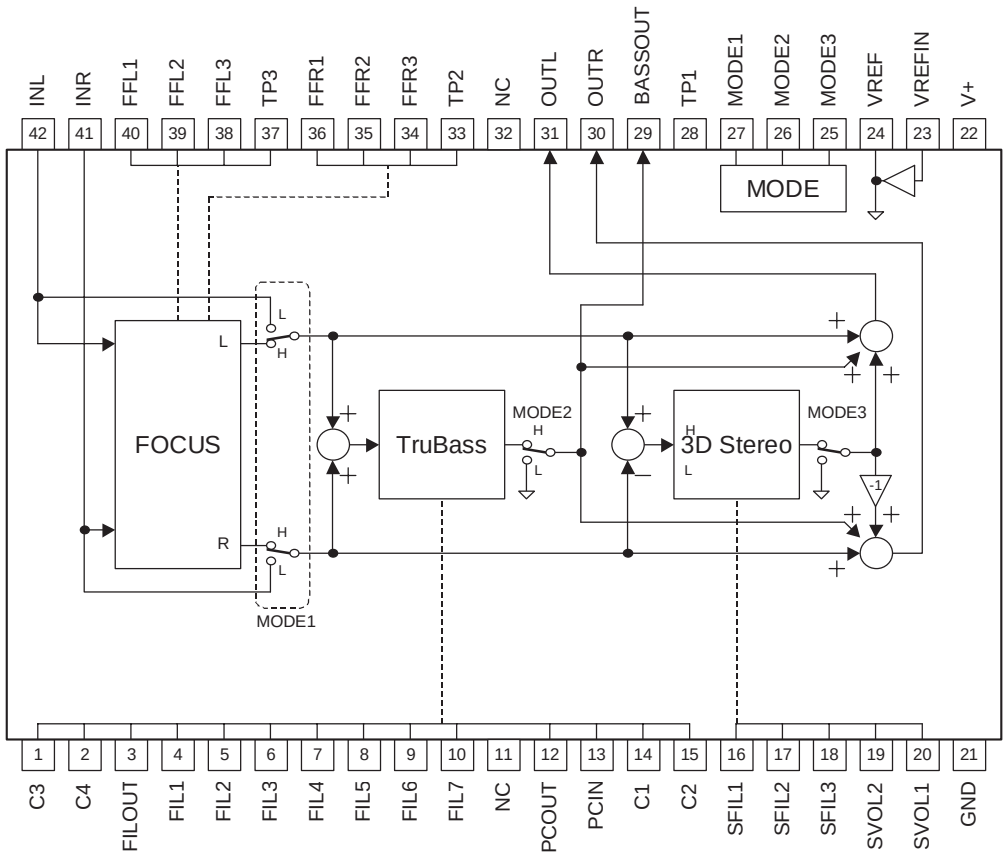
• Focus and SRS IC

● Pin Arrangement (Top view)

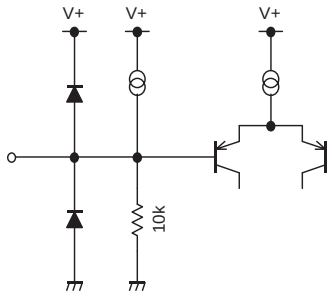
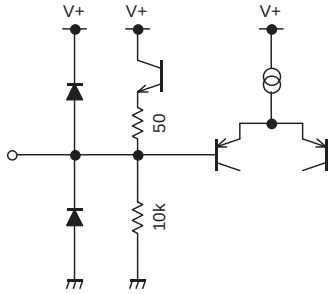
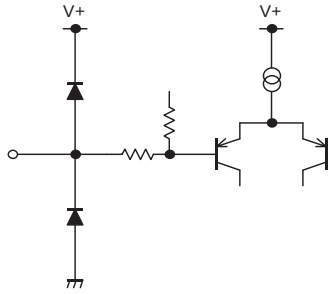
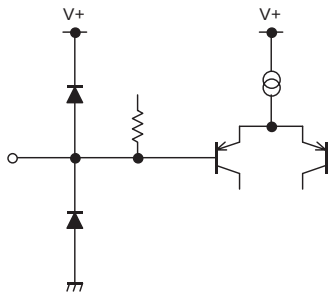


1.	C3	15.	C2	29.	BASSOUT
2.	C4	16.	SFIL1	30.	OUTR
3.	FILOUT	17.	SFIL2	31.	OUTL
4.	FIL1	18.	SFIL3	32.	NC
5.	FIL2	19.	SVOL2	33.	TP2
6.	FIL3	20.	SVOL1	34.	FFR3
7.	FIL4	21.	GND	35.	FFR2
8.	FIL5	22.	V+	36.	FFR1
9.	FIL6	23.	VREFIN	37.	TP3
10.	FIL7	24.	VREF	38.	FFL3
11.	NC	25.	MODE3	39.	FFL2
12.	PCOUT	26.	MODE2	40.	FFL1
13.	PCIN	27.	MODE1	41.	INR
14.	C1	28.	TP1	42.	INL

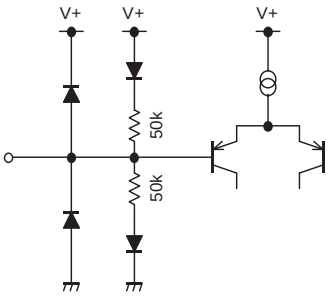
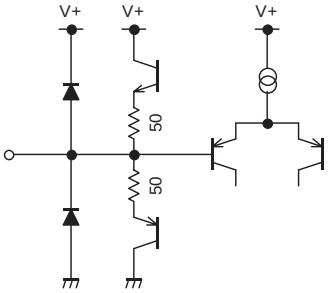
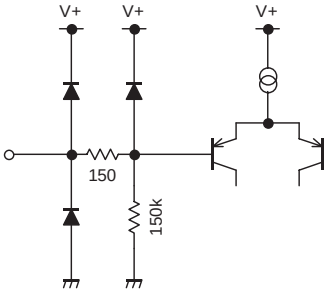
● Block Diagram



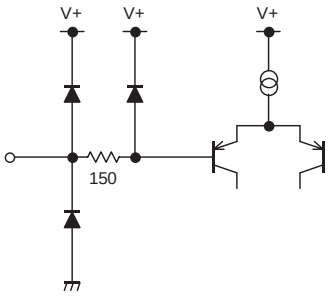
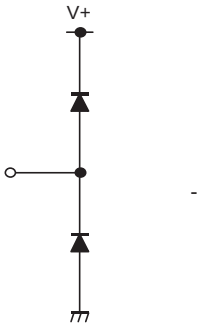
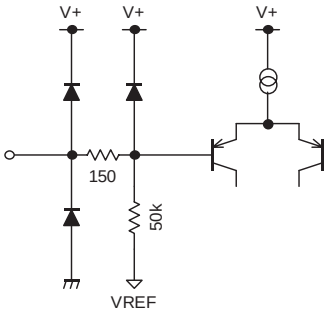
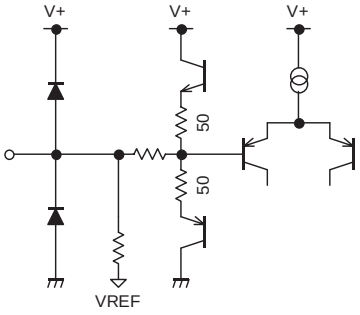
● Pin Function

No.			Pin Name		Equivalent Circuit	
SDIP42	SOP40	QFP48				
14	13	9	C1			0V
15	14	10	C2			0V
16 17 18	15 16 17	11 14 15	SFIL1 SFIL2 SFIL3			V+/2
19 2 5	18 2 5	16 44 47	SVOL2 C4 FIL2	WIDTH VR		V+/2

● Pin Function

No.			Pin Name		Equivalent Circuit	
SDIP42	SOP40	QFP48				
21	20	18	GND	GND	———	0V
22	21	19	V+		———	V+
23	22	20	VREFIN			V+/2
24 29 30 31 36 40 3	23 28 29 30 34 38 3	21 28 29 30 34 40 45	VREF BASSOUT OUTR OUTL FFR1 FFL1 FILOUT	TruBass Rch Lch		V+/2
25 26 27	24 25 26	22 23 26	MODE3 MODE2 MODE1	3 2 1		0V

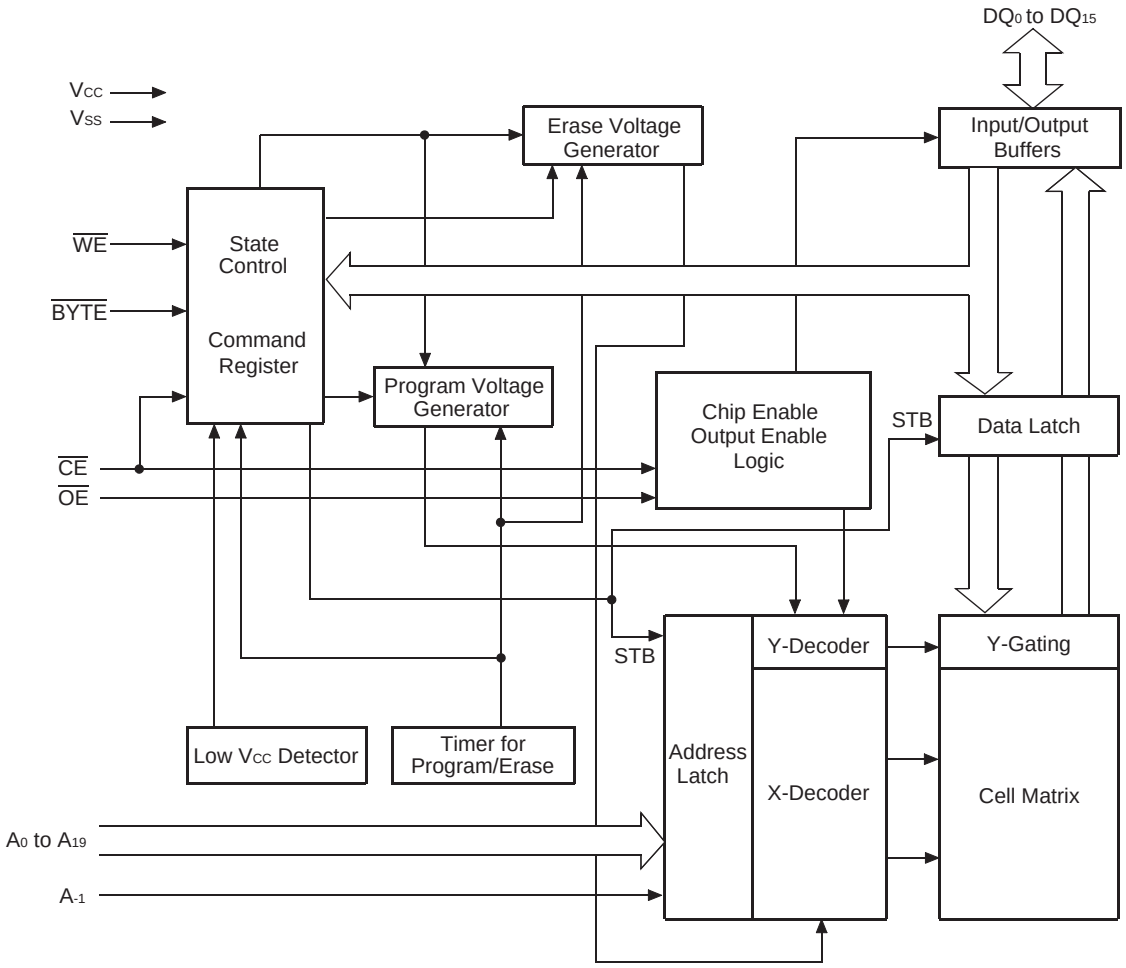
● Pin Function

No.			Pin Name		Equivalent Circuit	
SDIP42	SOP40	QFP48				
28 35 39	27 33 37	27 33 39	TP1 FFR2 FFL2			V+/2
33 37	31 35	31 35	TP2 TP3			
41 42	39 40	41 42	INR INL	Rch Lch		V+/2
4	4	46	FIL1			V+/2

■ MBM29PL160BD (DIGITAL VIDEO ASSY: IC5303)

• Flash Memory IC

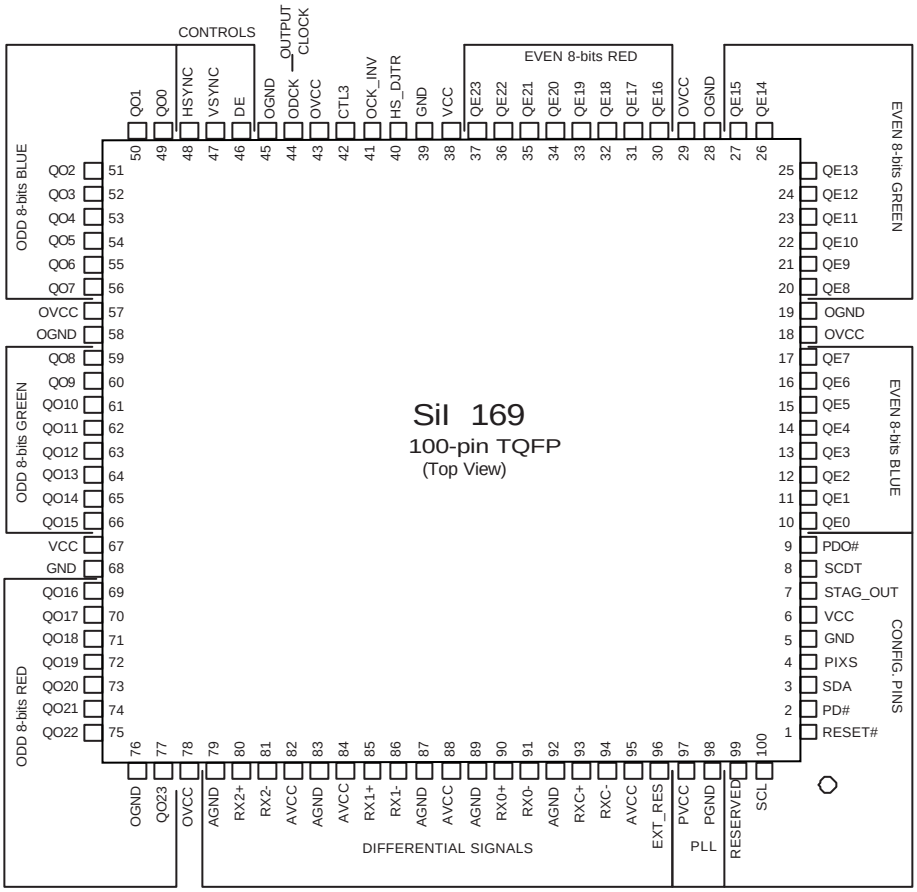
● Block Diagram



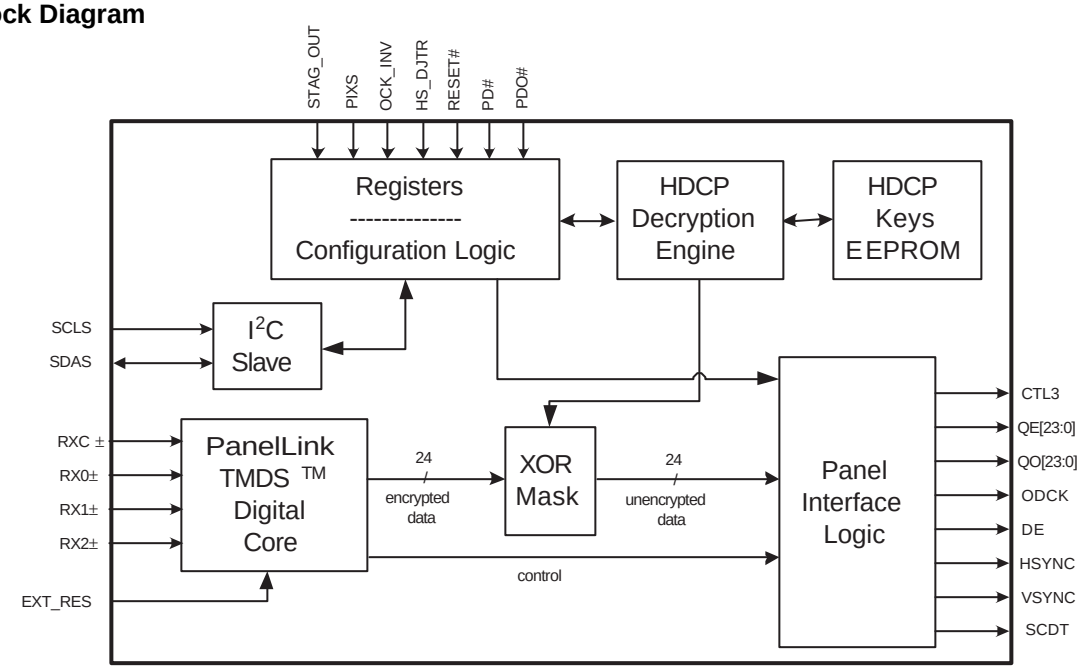
■ SII169CTG100 (PANEL IF ASSY: IC4202)

• Receiver IC

● Pin Arrangement (Top view)



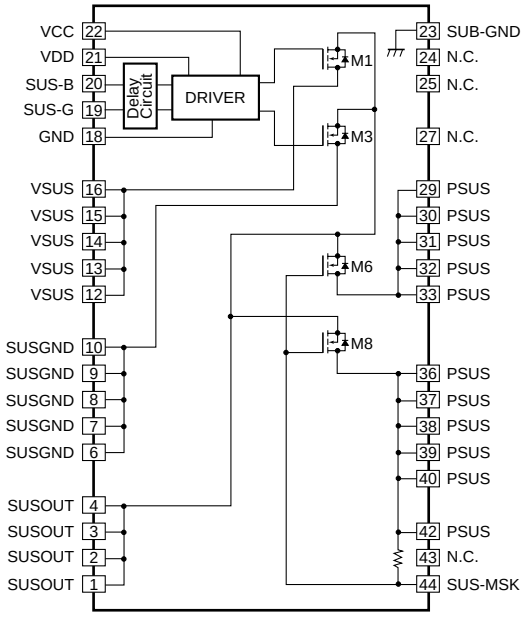
● Block Diagram



STK795-510 (43 X DRIVE ASSY: IC1203, IC1207)

• PDP Mask Module IC

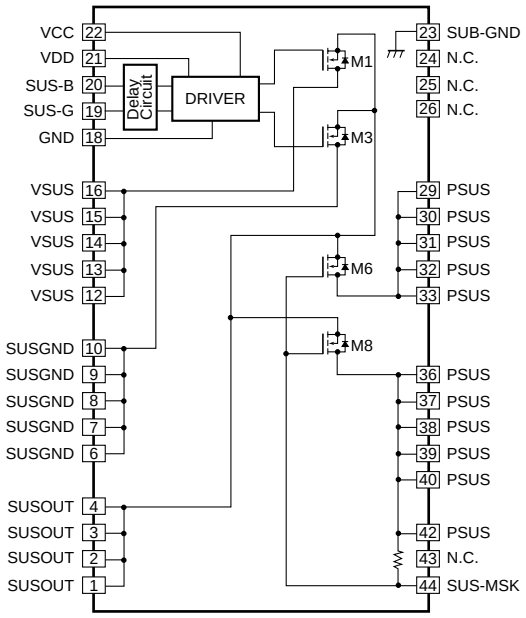
● **Block Diagram**



STK795-511 (43 Y DRIVE ASSY: IC2303, IC2307)

• PDP Mask Module IC

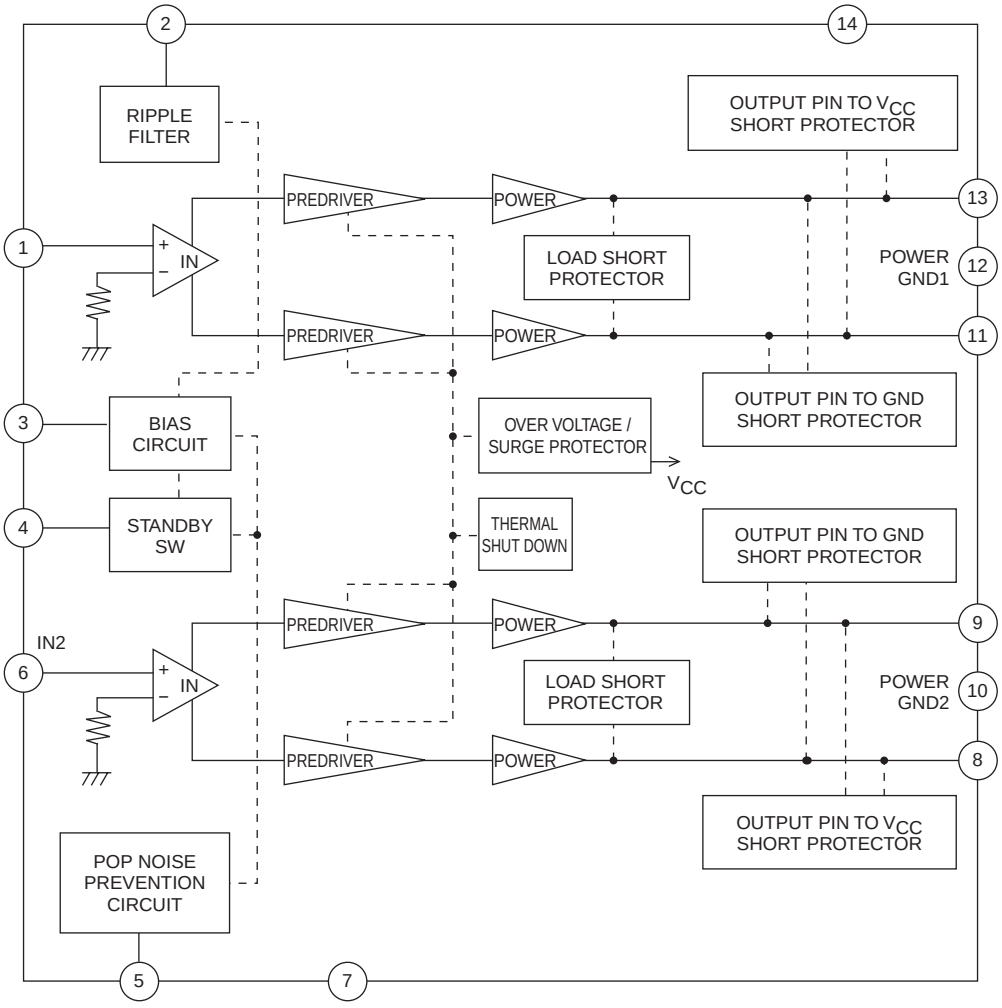
● **Block Diagram**



■ LA4625 (HD AUDIO ASSY: IC3504)

• 2ch BTL AF Power Amp IC

● Block Diagram



■ M30626FHPGP (DIGITAL VIDEO ASSY : IC5201)

• PDP UCOM

● **Pin Function (1/2)**

No.	Pin Name	Function	I/0	ACTIVE
1	VSUS	[D/A] Vofs power control	O	
2	VOFS	[D/A] Vofs power control	O	
3	TXD_IC4	3 serial communication with IC4MANTA - data transmission	O	
4	RXD_IC4	3 serial communication with IC4MANTA - data receive	I	
5	CLK_IC4	3 serial communication with IC4MANTA - clock output	O	
6	BYTE	(GND connection)	I	
7	CNVSS	Pin for processor mode setting (pull-down)	I	
8	NC	NC pin		
9	NC	NC pin		
10	RST_MD	Reset input	I	L
11	XOUT	Output for main clock	O	–
12	VSS	GND	–	–
13	XIN	Input for main clock	I	–
14	VCC1	Power supply = STB3.3V	–	–
15	NMI	(pull-up)	I	
16	REM_B	(Interruption) Remote control signal input (in the panel unit)	I	
17	KEY_B	(Interruption) Key signal input (in the panel unit)	I	
18	RST2	(Interruption) IC4 reset detection	I	L
19	HD_IN_B	HD signal existence distinction	I	L
20	PD_MUTE	Mute the power down output to the POWER SUPPLY Unit	O	L
21	PS_PD	PD signal in the POWER SUPPLY Unit	I	H
22	DCC_PD	PD signal of DC-DC converter	I	H
23	NC	NC pin		
24	NC	NC pin		
25	VD_IN	V. frequency count	I	L
26	EEPRST	EEPROM power SW	O	H
27	E_SCL	IIC clock output for EEPROM	O	
28	E_SDA	IIC data I/O for EEPROM	I/O	
29	TXD	Communication with flash ROM writer - data transmission	O	
30	RXD	Communication with flash ROM writer - data receive	I	
31	SCLK	Communication with flash ROM writer - clock input	I	
32	BUSY	Communication with flash ROM writer - busy output	O	
33	TXD0	UART communication with main UCOM (external PC) - data transmission	O	
34	RXD0	UART communication with main UCOM (external PC) - data receive	I	
35	NC	NC pin		
36	REQ_MD	Communication request to the main UCOM	O	H
37	PSW_D	Mute of DC-DC converter	O	H
38	WE_IC4	In IC4 (MANTA) rewriting, control for communication path switch	O	H
39	EPM	Setting pin for flash rewriting mode (pull-down)	I	
40	IC4_RST	IC4 forced reset	O	L
41	IC4_CE	Enable for IC4 communication	O	L
42	IC4_BUSY	Busy input for IC4 communication	I	H
43	REQ_IC4	Communication request from the IC4	I	H
44	CE	Setting pin for flash rewriting mode (pull-up)	I	
45	PSIZE	Panel size distinction	I	
46	B_SCL	IIC clock output for backup EEPROM	O	H
47	B_SDA	IIC DATA I/O for backup EEPROM	I/O	H
48	ADR_PD	PD signal of address junction	I	H
49	LED_G	Green LED control	O	L
50	LED_R	Red LED control	O	L

M30626FHPGP (DIGITAL VIDEO ASSY : IC5201)

• PDP UCOM

● Pin Function (2/2)

No.	Pin Name	Function	I/0	ACTIVE
51	DRV_OFF	Driving OFF	O	H
52	RELAY	Power ON control output	O	H
53	POWER	Power ON control input	I	H
54	MR_ST_B	MDR connection detection	I	L
55	OP_DET	Rear case open detection	I	
56	NC	NC pin		
57	PNL_MUTE	Panel mute	I	
58	DITHER	PC/VIDEO dither switch (panel module exclusive use)	I	
59	NC	NC pin		
60	VCC2	Power supply = STB 3.3V	–	–
61	PD_TRG	PD detection	I	L
62	VSS	GND	–	–
63	VH_PD	Vh power decrease PD	I	H
64	YDRV_PD	Y drive PD signal	I	H
65	YRES_PD	Y drive PD signal	I	H
66	YDCDC_PD	PD signal of Y drive DC-DC converter	I	H
67	IC5V_PD	5V power decrease PD	I	H
68	XSUS_PD	X drive PD signal	I	H
69	XDCDC_PD	PD signal of X drive DC-DC converter	I	H
70	XDRV_PD	X drive PD signal	I	H
71	NC	NC pin		
72	MR_AC	MR power monitor	I	H
73	AC_DET	AC power monitor at panel side (same signal as CST1)	I	L
74	DVI_MUTE	Mute of panel link output	O	H
75	A_MUTE	Audio mute	O	H
76	A_NG	Audio NG detection	I	L
77	A_SCL	IIC clock output for audio/others	O	L
78	A_SDA	IIC data I/O for audio/others	I/O	L
79	TRUBASS	TRUBASS ON/OFF	O	H
80	STB_SW	Standby setting of audio amp.	O	L
81	FOCUS	FOCUS ON/OFF	O	H
82	SRS	SRS ON/OFF	O	H
83	DDC_WP	DDCROM write protection	O	H
84	DVI_DET	DVI cable disconnection detection	I	H
85	RSTBTMDS	Reset detection of panel link receiver	I	L
86	L_SYNC	DE omission detection of the panel link	I	L
87	NC	NC pin		
88	NC	NC pin		
89	MASK1	[A/D] Mask display setting	I	
90	MAX_PLS2	[A/D] Brightness setting for panel module	I	
91	MAX_PLS1	[A/D] Brightness setting for panel module	I	
92	TEMP	[A/D] AD input for temperature sensor	I	
93	MODE	[A/D] Operation mode setting	I	
94	AVSS	GND for A/D input	–	–
95	MODEL	[A/D] CMX/HD/TV/WX distinction	I	
96	VREF	Reference voltage for A/D input	–	–
97	AVCC	Power supply for A/D input = STB3.3V	–	–
98	NC	NC pin		
99	NC	NC pin		
100	AMG_MD	Address emergency monitor	I	H

■ PD5856A (DIGITAL VIDEO ASSY : IC5401)

• PDP ASIC IC4

● **Pin Function (1/10)**

Ball No.	No.	Pin Name	Function
A1	1	BAI_6	A phase signal input of B video (sixth bit)
B1	2	BAI_5	A phase signal input of B video (fifth bit)
C1	3	BAI_4	A phase signal input of B video (fourth bit)
D1	4	NC	NC pin
E1	5	NC	NC pin
F1	6	BAI_3	A phase signal input of B video (fifth bit)
G1	7	BAI_2	A phase signal input of B video (fourth bit)
H1	8	FIELD	FIELD signal input
J1	9	XSUSB_12	X-Drive control signal output
K1	10	XSUSB_10	X-Drive control signal output
L1	11	XSUSB_4	X-Drive control signal output
M1	12	XSUSB_0	X-Drive control signal output
N1	13	XSUSA_10	X-Drive control signal output
P1	14	XSUSA_4	X-Drive control signal output
R1	15	XSUSA_2	X-Drive control signal output
T1	16	ADRS_0	Address control signal output
U1	17	AD6TXOUT3M	Address LVDS signal output
V1	18	AD6TXCLKOUTM	Address LVDS signal output
W1	19	AD6TXOUT2M	Address LVDS signal output
Y1	20	AD6TXOUT1M	Address LVDS signal output
AA1	21	AD6TXOUT0M	Address LVDS signal output
AB1	22	AD7TXOUT3M	Address LVDS signal output
AC1	23	AD7TXCLKOUTM	Address LVDS signal output
AD1	24	AD7TXOUT2M	Address LVDS signal output
AE1	25	AD7TXOUT1M	Address LVDS signal output
AF1	26	AD7TXOUT0M	Address LVDS signal output
AF2	27	AD7TXOUT0P	Address LVDS signal output
AF3	28	VSSLA	GND
AF4	29	AD3TXOUT3M	Address LVDS signal output
AF5	30	AD3TXCLKOUTM	Address LVDS signal output
AF6	31	AD3TXOUT2M	Address LVDS signal output
AF7	32	AD3TXOUT1M	Address LVDS signal output
AF8	33	AD3TXOUT0M	Address LVDS signal output
AF9	34	AD2TXOUT3M	Address LVDS signal output
AF10	35	AD2TXCLKOUTM	Address LVDS signal output
AF11	36	AD2TXOUT2M	Address LVDS signal output
AF12	37	AD2TXOUT1M	Address LVDS signal output
AF13	38	AD2TXOUT0M	Address LVDS signal output
AF14	39	AD1TXOUT3M	Address LVDS signal output
AF15	40	AD1TXCLKOUTM	Address LVDS signal output
AF16	41	AD1TXOUT2M	Address LVDS signal output
AF17	42	AD1TXOUT1M	Address LVDS signal output
AF18	43	AD1TXOUT0M	Address LVDS signal output
AF19	44	AD0TXOUT3M	Address LVDS signal output
AF20	45	AD0TXCLKOUTM	Address LVDS signal output
AF21	46	AD0TXOUT2M	Address LVDS signal output
AF22	47	AD0TXOUT1M	Address LVDS signal output
AF23	48	AD0TXOUT0M	Address LVDS signal output
AF24	49	VSSL15	GND
AF25	50	AD4TXOUT3P	Address LVDS signal output

■ PD5856A (DIGITAL VIDEO ASSY : IC5401)

• PDP ASIC IC4

● Pin Function (2/10)

Ball No.	No.	Pin Name	Function
AF26	51	AD4TXOUT3M	Address LVDS signal output
AE26	52	AD4TXCLKOUTM	Address LVDS signal output
AD26	53	AD4TXOUT2M	Address LVDS signal output
AC26	54	AD4TXOUT1M	Address LVDS signal output
AB26	55	AD4TXOUT0M	Address LVDS signal output
AA26	56	AD5TXOUT3M	Address LVDS signal output
Y26	57	AD5TXCLKOUTM	Address LVDS signal output
W26	58	AD5TXOUT2M	Address LVDS signal output
V26	59	AD5TXOUT1M	Address LVDS signal output
U26	60	AD5TXOUT0M	Address LVDS signal output
T26	61	SDIDBI_N	JTAG signal
R26	62	SDIJTAG	JTAG signal
P26	63	GPIO0_3	Microcomputer macro general-purpose port
N26	64	GPIO0_1	Microcomputer macro general-purpose port
M26	65	YSUSA_4	Y-Drive control signal output
L26	66	YSUSA_10	Y-Drive control signal output
K26	67	YSUSA_14	Y-Drive control signal output
J26	68	YSUSB_4	Y-Drive control signal output
H26	69	YSUSB_6	Y-Drive control signal output
G26	70	YSUSB_10	Y-Drive control signal output
F26	71	YSUSB_14	Y-Drive control signal output
E26	72	NC	NC pin
D26	73	NC	NC pin
C26	74	SCAN_10	Scan control signal output
B26	75	CSIOTXD	Communication with microcomputer
A26	76	CSRD_N	Communication with microcomputer
A25	77	CSCS_N0	Communication with microcomputer
A24	78	EXA16	Flash memory address bus
A23	79	EXA15	Flash memory address bus
A22	80	EXA14	Flash memory address bus
A21	81	EXA13	Flash memory address bus
A20	82	EXA12	Flash memory address bus
A19	83	EXA10	Flash memory address bus
A18	84	EXA7	Flash memory address bus
A17	85	EXA1	Flash memory address bus
A16	86	EXDIO_3	Flash memory data bus
A15	87	EXDIO_5	Flash memory data bus
A14	88	EXDIO_11	Flash memory data bus
A13	89	TRNSEND_O	NC pin
A12	90	RBI_5	B phase signal input of R video (fifth bit)
A11	91	RBI_0	B phase signal input of R video (0 bit)
A10	92	GBI_8	B phase signal input of G video (eighth bit)
A9	93	GBI_2	B phase signal input of G video (second bit)
A8	94	BBI_6	B phase signal input of B video (sixth bit)
A7	95	BBI_0	B phase signal input of B video (0 bit)
A6	96	VDI	VD signal input
A5	97	RAI_5	A phase signal input of R video (fifth bit)
A4	98	DCLKI	CLK input
A3	99	GAI_4	A phase signal input of G video (fourth bit)
A2	100	BAI_9	A phase signal input of B video (ninth bit)

PD5856A (DIGITAL VIDEO ASSY : IC5401)

• PDP ASIC IC4

Pin Function (3/10)

Ball No.	No.	Pin Name	Function
B2	101	BAI_8	A phase signal input of B video (eighth bit)
C2	102	BAI_7	A phase signal input of B video (seventh bit)
D2	103	GND	GND
E2	104	NC	NC
F2	105	NC	NC
G2	106	BAI_1	A phase signal input of B video (first bit)
H2	107	XSUSB_15	X-Drive control signal output
J2	108	GND	GND
K2	109	XSUSB_9	X-Drive control signal output
L2	110	XSUSB_3	X-Drive control signal output
M2	111	XSUSA_15	X-Drive control signal output
N2	112	XSUSA_9	X-Drive control signal output
P2	113	GND	GND
R2	114	XSUSA_1	X-Drive control signal output
T2	115	TEST2	Test signal input (Not used)
U2	116	AD6TXOUT3P	Address LVDS signal output
V2	117	AD6TXCLKOUTP	Address LVDS signal output
W2	118	AD6TXOUT2P	Address LVDS signal output
Y2	119	AD6TXOUT1P	Address LVDS signal output
AA2	120	AD6TXOUT0P	Address LVDS signal output
AB2	121	AD7TXOUT3P	Address LVDS signal output
AC2	122	AD7TXCLKOUTP	Address LVDS signal output
AD2	123	AD7TXOUT2P	Address LVDS signal output
AE2	124	AD7TXOUT1P	Address LVDS signal output
AE3	125	VSSLA	GND
AE4	126	AD3TXOUT3P	Address LVDS signal output
AE5	127	AD3TXCLKOUTP	Address LVDS signal output
AE6	128	AD3TXOUT2P	Address LVDS signal output
AE7	129	AD3TXOUT1P	Address LVDS signal output
AE8	130	AD3TXOUT0P	Address LVDS signal output
AE9	131	AD2TXOUT3P	Address LVDS signal output
AE10	132	AD2TXCLKOUTP	Address LVDS signal output
AE11	133	AD2TXOUT2P	Address LVDS signal output
AE12	134	AD2TXOUT1P	Address LVDS signal output
AE13	135	AD2TXOUT0P	Address LVDS signal output
AE14	136	AD1TXOUT3P	Address LVDS signal output
AE15	137	AD1TXCLKOUTP	Address LVDS signal output
AE16	138	AD1TXOUT2P	Address LVDS signal output
AE17	139	AD1TXOUT1P	Address LVDS signal output
AE18	140	AD1TXOUT0P	Address LVDS signal output
AE19	141	AD0TXOUT3P	Address LVDS signal output
AE20	142	AD0TXCLKOUTP	Address LVDS signal output
AE21	143	AD0TXOUT2P	Address LVDS signal output
AE22	144	AD0TXOUT1P	Address LVDS signal output
AE23	145	AD0TXOUT0P	Address LVDS signal output
AE24	146	VSSL15	GND
AE25	147	AD4TXCLKOUTP	Address LVDS signal output
AD25	148	AD4TXOUT2P	Address LVDS signal output
AC25	149	AD4TXOUT1P	Address LVDS signal output
AB25	150	AD4TXOUT0P	Address LVDS signal output

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Pin Function (4/10)

Ball No.	No.	Pin Name	Function
AA25	151	AD5TXOUT3P	Address LVDS signal output
Y25	152	AD5TXCLKOUTP	Address LVDS signal output
W25	153	AD5TXOUT2P	Address LVDS signal output
V25	154	AD5TXOUT1P	Address LVDS signal output
U25	155	AD5TXOUT0P	Address LVDS signal output
T25	156	SDITRST_N	JTAG signal
R25	157	RESETX	Reset input
P25	158	GND	GND
N25	159	GPIO0_0	Microcomputer macro general-purpose port
M25	160	YSUSA_5	Y-Drive control signal output
L25	161	YSUSA_11	Y-Drive control signal output
K25	162	YSUSA_15	Y-Drive control signal output
J25	163	GND	GND
H25	164	YSUSB_7	Y-Drive control signal output
G25	165	YSUSB_11	Y-Drive control signal output
F25	166	NC	NC pin
E25	167	NC	NC pin
D25	168	GND	GND
C25	169	SCAN_11	Scan control signal output
B25	170	CSIORXD	Communication with UCOM
B24	171	CSIOSCKI	Communication with UCOM
B23	172	UARTTXD	Communication with UCOM
B22	173	UARTRXD	Communication with UCOM
B21	174	CSWR_N0	Communication with UCOM
B20	175	GND	GND
B19	176	EXA9	Flash memory address bus
B18	177	EXA6	Flash memory address bus
B17	178	EXA0	Flash memory address bus
B16	179	GND	GND
B15	180	EXDIO_6	Flash memory data bus
B14	181	EXDIO_12	Flash memory data bus
B13	182	RBI_9	B phase signal input of R video (ninth bit)
B12	183	RBI_4	B phase signal input of R video (fourth bit)
B11	184	GND	GND
B10	185	GBI_7	B phase signal input of G video (seventh bit)
B9	186	GBI_1	B phase signal input of G video (first bit)
B8	187	BBI_5	B phase signal input of B video (fifth bit)
B7	188	GND	GND
B6	189	HDI	HD signal input
B5	190	RAI_4	A phase signal input of R video (fourth bit)
B4	191	GAI_9	A phase signal input of G video (ninth bit)
B3	192	GAI_3	A phase signal input of G video (third bit)
C3	193	GAI_2	A phase signal input of G video (second bit)
D3	194	VDDD33	3.3V power supply
E3	195	GAI_1	A phase signal input of G video (first bit)
F3	196	GAI_0	A phase signal input of G video (0 bit)
G3	197	NC	NC pin
H3	198	XSUSB_14	X-Drive control signal output
J3	199	VDDIO	3.3V power supply
K3	200	XSUSB_8	X-Drive control signal output

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● Pin Function (5/10)

Ball No.	No.	Pin Name	Function
L3	201	XSUSB_2	X-Drive control signal output
M3	202	XSUSA_14	X-Drive control signal output
N3	203	XSUSA_8	X-Drive control signal output
P3	204	VDDIO	3.3V power supply
R3	205	XSUSA_0	X-Drive control signal output
T3	206	TEST1	Test signal input (Not used)
U3	207	VSSLA	GND
V3	208	VSSLA	GND
W3	209	VSSLA	GND
Y3	210	VSSLA	GND
AA3	211	VSSLA	GND
AB3	212	VSSLA	GND
AC3	213	VSSLA	GND
AD3	214	VSSLA	GND
AD4	215	VSSLA	GND
AD5	216	VSSLA	GND
AD6	217	VSSLA	GND
AD7	218	VSSLA	GND
AD8	219	VSSLA	GND
AD9	220	VSSLA	GND
AD10	221	VSSLA	GND
AD11	222	VSSLA	GND
AD12	223	VSSLA	GND
AD13	224	VSSLA	GND
AD14	225	VSSLA	GND
AD15	226	VSSLA	GND
AD16	227	VSSLA	GND
AD17	228	VSSLA	GND
AD18	229	VSSLA	GND
AD19	230	VSSLA	GND
AD20	231	VSSLA	GND
AD21	232	VSSLA	GND
AD22	233	VSSLA	GND
AD23	234	VSSLA	GND
AD24	235	VSSLA	GND
AC24	236	VSSLA	GND
AB24	237	VSSLA	GND
AA24	238	VSSLA	GND
Y24	239	VSSLA	GND
W24	240	VSSLA	GND
V24	241	VSSLA	GND
U24	242	VSSLA	GND
T24	243	SDITDO	JTAG signal
R24	244	GPIO0_7	Microcomputer macro general-purpose port
P24	245	VDDIO	3.3V power supply
N24	246	YSUSA_0	Y-Drive control signal output
M24	247	YSUSA_6	Y-Drive control signal output
L24	248	YSUSA_12	Y-Drive control signal output
K24	249	YSUSB_0	Y-Drive control signal output
J24	250	VDDD33	3.3V power supply

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Pin Function (6/10)

Ball No.	No.	Pin Name	Function
H24	251	YSUSB_8	Y-Drive control signal output
G24	252	NC	NC pin
F24	253	YSUSB_15	Y-Drive control signal output
E24	254	SCAN_3	Scan control signal output
D24	255	VDDD33	3.3V power supply
C24	256	SCAN_12	Scan control signal output
C23	257	SCAN_13	Scan control signal output
C22	258	SCAN_14	Scan control signal output
C21	259	SCAN_15	Scan control signal output
C20	260	VDDIO	3.3V power supply
C19	261	EXA8	Flash memory address bus
C18	262	EXA5	Flash memory address bus
C17	263	CLKD	CLK input (60MHz)
C16	264	VDDIO	3.3V power supply
C15	265	EXDIO_7	Flash memory data bus
C14	266	EXDIO_13	Flash memory data bus
C13	267	RBI_8	B phase signal input of R video (eighth bit)
C12	268	RBI_3	B phase signal input of R video (third bit)
C11	269	VDDIO	3.3V power supply
C10	270	GBI_6	B phase signal input of G video (sixth bit)
C9	271	GBI_0	B phase signal input of G video (0 bit)
C8	272	BBI_4	B phase signal input of B video (fourth bit)
C7	273	VDDIO	3.3V power supply
C6	274	RAI_9	A phase signal input of R video (ninth bit)
C5	275	RAI_3	A phase signal input of R video (third bit)
C4	276	GAI_8	A phase signal input of G video (eighth bit)
D4	277	GAI_7	A phase signal input of G video (seventh bit)
E4	278	GAI_6	A phase signal input of G video (sixth bit)
F4	279	GAI_5	A phase signal input of G video (fifth bit)
G4	280	VCMP	GND
H4	281	XSUSB_13	X-Drive control signal output
J4	282	XSUSB_11	X-Drive control signal output
K4	283	XSUSB_7	X-Drive control signal output
L4	284	XSUSB_1	X-Drive control signal output
M4	285	XSUSA_13	X-Drive control signal output
N4	286	XSUSA_7	X-Drive control signal output
P4	287	XSUSA_3	X-Drive control signal output
R4	288	ADRS_3	Address control signal output
T4	289	TESTAN	Test signal input (Not used)
U4	290	VDDLA	3.3V power supply
V4	291	VDDLA	3.3V power supply
W4	292	VDDLA	3.3V power supply
Y4	293	VDDLA	3.3V power supply
AA4	294	VDDLA	3.3V power supply
AB4	295	VDDLA	3.3V power supply
AC4	296	VDDLA	3.3V power supply
AC5	297	VDDLA	3.3V power supply
AC6	298	VDDLA	3.3V power supply
AC7	299	VDDLA	3.3V power supply
AC8	300	VDDLA	3.3V power supply

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● Pin Function (7/10)

Ball No.	No.	Pin Name	Function
AC8	300	VDDLA	3.3V power supply
AC9	301	VDDLA	3.3V power supply
AC10	302	VDDLA	3.3V power supply
AC11	303	VDDLA	3.3V power supply
AC12	304	VDDLA	3.3V power supply
AC13	305	VDDLA	3.3V power supply
AC14	306	VDDBG	3.3V power supply
AC15	307	VDDLA	3.3V power supply
AC16	308	VDDLA	3.3V power supply
AC17	309	VDDLA	3.3V power supply
AC18	310	VDDLA	3.3V power supply
AC19	311	VDDLA	3.3V power supply
AC20	312	VDDLA	3.3V power supply
AC21	313	VDDLA	3.3V power supply
AC22	314	VDDLA	3.3V power supply
AC23	315	VDDLA	3.3V power supply
AB23	316	VDDLA	3.3V power supplyv
AA23	317	VDDLA	3.3V power supply
Y23	318	VDDLA	3.3V power supply
W23	319	VDDLA	3.3V power supply
V23	320	VDDLA	3.3V power supply
U23	321	VDDLA	3.3V power supply
T23	322	SDITDI	JTAG signal
R23	323	GPIO0_6	Microcomputer macro general-purpose port
P23	324	GPIO0_2	Microcomputer macro general-purpose port
N23	325	YSUSA_1	Y-Drive control signal output
M23	326	YSUSA_7	Y-Drive control signal output
L23	327	YSUSA_13	Y-Drive control signal output
K23	328	YSUSB_1	Y-Drive control signal output
J23	329	YSUSB_5	Y-Drive control signal output
H23	330	YSUSB_9	Y-Drive control signal output
G23	331	VCMP	GND
F23	332	SCAN_0	Scan control signal output
E23	333	SCAN_4	Scan control signal output
D23	334	SCAN_7	Scan control signal output
D22	335	SCAN_8	Scan control signal output
D21	336	SCAN_9	Scan control signal output
D20	337	EXA11	Flash memory address bus
D19	338	EXA19	Flash memory address bus
D18	339	EXA4	Flash memory address bus
D17	340	EXDIO_0	Flash memory data bus
D16	341	EXDIO_4	Flash memory data bus
D15	342	EXDIO_8	Flash memory data bus
D14	343	EXDIO_14	Flash memory data bus
D13	344	RBI_7	B phase signal input of R video (seventh bit)
D12	345	RBI_2	B phase signal input of R video (second bit)
D11	346	GBI_9	B phase signal input of G video (ninth bit)
D10	347	GBI_5	B phase signal input of G video (fifth bit)
D9	348	BBI_9	B phase signal input of B video (ninth bit)
D8	349	BBI_3	B phase signal input of B video (tenth bit)

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● Pin Function (8/10)

Ball No.	No.	Pin Name	Function
D7	350	DEI	DE signal input
D6	351	RAI_8	A phase signal input of R video (eighth bit)
D5	352	RAI_2	A phase signal input of R video (second bit)
E5	353	RAI_1	A phase signal input of R video (first bit)
F5	354	RAI_0	A phase signal input of R video (0 bit)
G5	355	BAI_0	A phase signal input of B video (0 bit)
H5	356	VSS15	GND
J5	357	VDDHR	3.3V power supply
K5	358	XSUSB_6	X-Drive control signal output
L5	359	VSSD15	GND
M5	360	XSUSA_12	X-Drive control signal output
N5	361	XSUSA_6	X-Drive control signal output
P5	362	VSS15	GND
R5	363	ADRS_2	Address control signal output
T5	364	TESTBN	Test signal input (Not used)
U5	365	VSSL15	GND
V5	366	VSSLA	GND
W5	367	VSSLA	GND
Y5	368	VSSL15	GND
AA5	369	VDDLP	3.3V power supply
AB5	370	VSSL15	GND
AB6	371	VSSLA	GND
AB7	372	VSSLA	GND
AB8	373	VSSL15	GND
AB9	374	VSSLA	GND
AB10	375	VSSLA	GND
AB11	376	VSSL15	GND
AB12	377	VSSLA	GND
AB13	378	VSSLA	GND
AB14	379	REFRIN	Reference current generation
AB15	380	VSSBG	GND
AB16	381	VSSL15	GND
AB17	382	VSSLA	GND
AB18	383	VSSLA	GND
AB19	384	VSSL15	GND
AB20	385	VSSLA	GND
AB21	386	VSSLA	GND
AB22	387	VSSLA	GND
AA22	388	VDDLA	3.3V power supply
Y22	389	VSSL15	GND
W22	390	VSSLA	GND
V22	391	VSSLA	GND
U22	392	VSSL15	GND
T22	393	SDITMS	JTAG signal
R22	394	GPIO0_5	Microcomputer macro general-purpose port
P22	395	VSS15	GND
N22	396	YSUSA_2	Y-Drive control signal output
M22	397	YSUSA_8	Y-Drive control signal output
L22	398	VSSD15	GND
K22	399	YSUSB_2	Y-Drive control signal output

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● Pin Function (9/10)

Ball No.	No.	Pin Name	Function
J22	400	VDDHL	3.3V power supply
H22	401	VSSD15	GND
G22	402	YSUSB_12	Y-Drive control signal output
F22	403	SCAN_1	Scan control signal output
E22	404	SCAN_5	Scan control signal output
E21	405	SCAN_6	Scan control signal output
E20	406	VSS15	GND
E19	407	EXA18	Flash memory address bus
E18	408	EXA3	Flash memory address bus
E17	409	EXDIO_1	Flash memory data bus
E16	410	VSS15	GND
E15	411	EXDIO_9	Flash memory data bus
E14	412	EXDIO_15	Flash memory data bus
E13	413	RBI_6	B phase signal input of R video (sixth bit)
E12	414	CLKS	CLK input (85MHz)
E11	415	VSS15	GND
E10	416	GBI_4	B phase signal input of G video (fourth bit)
E8	418	BBI_2	B phase signal input of B video (second bit)
E9	417	BBI_8	B phase signal input of B video (eighth bit)
E7	419	VSS15	GND
E6	420	RAI_7	A phase signal input of R video (seventh bit)
F6	421	RAI_6	A phase signal input of R video (sixth bit)
G6	422	APL_DT	APL value trigger input
H6	423	VDD15	1.5V power supply
J6	424	VBB	VBB power monitor in the DRAM
K6	425	XSUSB_5	X-Drive control signal output
L6	426	VDDD15	1.5V power supply
M6	427	XSUSA_11	X-Drive control signal output
N6	428	XSUSA_5	X-Drive control signal output
P6	429	VDD15	1.5V power supply
R6	430	ADRS_1	Address control signal output
T6	431	TESTCN	Test signal input (Not used)
U6	432	VDDL15	1.5V power supply
V6	433	VDDLA	3.3V power supply
W6	434	VDDLA	3.3V power supply
Y6	435	VDDL15	1.5V power supply
AA6	436	VDDLA	3.3V power supply
AA7	437	VDDLA	3.3V power supply
AA8	438	VDDL15	1.5V power supply
AA9	439	VDDLA	3.3V power supply
AA10	440	VDDLA	3.3V power supply
AA11	441	VDDL15	1.5V power supply
AA12	442	VDDLA	3.3V power supply
AA13	443	VDDLA	3.3V power supply
AA14	444	VDDLA	3.3V power supply
AA15	445	VDDLA	3.3V power supply
AA16	446	VDDL15	1.5V power supply
AA17	447	VDDLA	3.3V power supply
AA18	448	VDDLA	3.3V power supply
AA19	449	VDDL15	1.5V power supply

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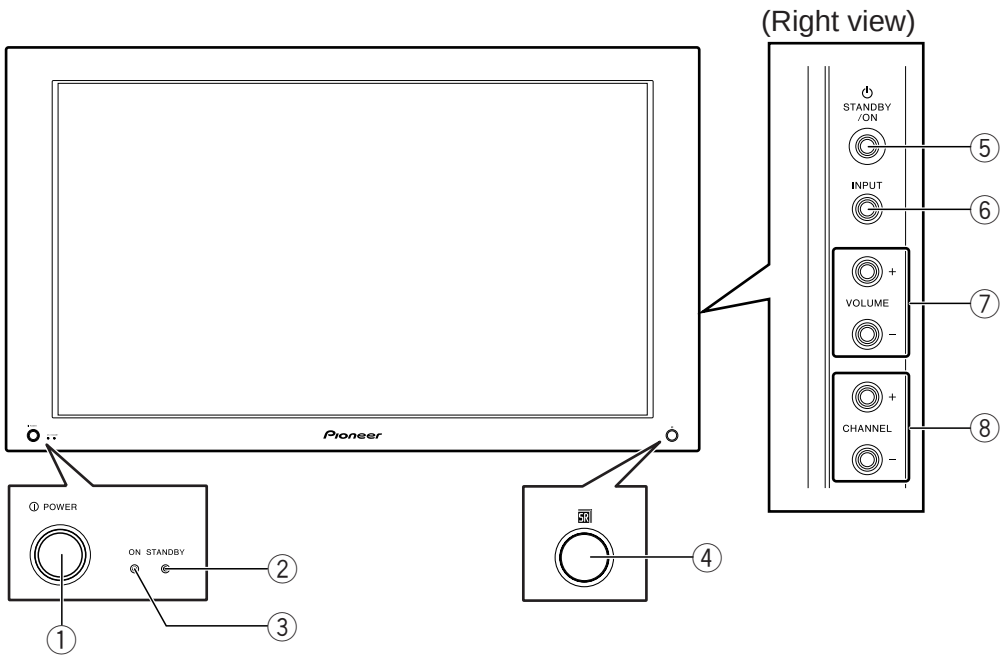
● Pin Function (10/10)

Ball No.	No.	Pin Name	Function
AA20	450	VDDLA	3.3V power supply
AA21	451	VDDLA	3.3V power supply
Y21	452	VDDL15	1.5V power supply
W21	453	VDDLA	3.3V power supply
V21	454	VDDLA	3.3V power supply
U21	455	VDDL15	1.5V power supply
T21	456	SDITCK	JTAG signal
R21	457	GPIO0_4	Microcomputer macro general-purpose port
P21	458	VDD15	1.5V power supply
N21	459	YSUSA_3	Y-Drive control signal output
M21	460	YSUSA_9	Y-Drive control signal output
L21	461	VDDD15	1.5V power supply
K21	462	YSUSB_3	Y-Drive control signal output
J21	463	VBB	VBB power monitor in the DRAM
H21	464	VDDD15	1.5V power supply
G21	465	YSUSB_13	Y-Drive control signal output
F21	466	SCAN_2	Scan control signal output
F20	467	VDD15	1.5V power supply
F19	468	EXA17	Flash memory address bus
F18	469	EXA2	Flash memory address bus
F17	470	EXDIO_2	Flash memory data bus
F16	471	VDD15	1.5V power supply
F15	472	EXDIO_10	Flash memory data bus
F14	473	TRNSEND_I	NC pin
F13	474	VDD15	1.5V power supply
F12	475	RBI_1	B phase signal input of R video (first bit)
F11	476	VDD15	1.5V power supply
F10	477	GBI_3	B phase signal input of G video (third bit)
F9	478	BBI_7	B phase signal input of B video (seventh bit)
F8	479	BBI_1	B phase signal input of B video (first bit)
F7	480	VDD15	1.5V power supply

8. PANEL FACILITIES AND SPECIFICATIONS

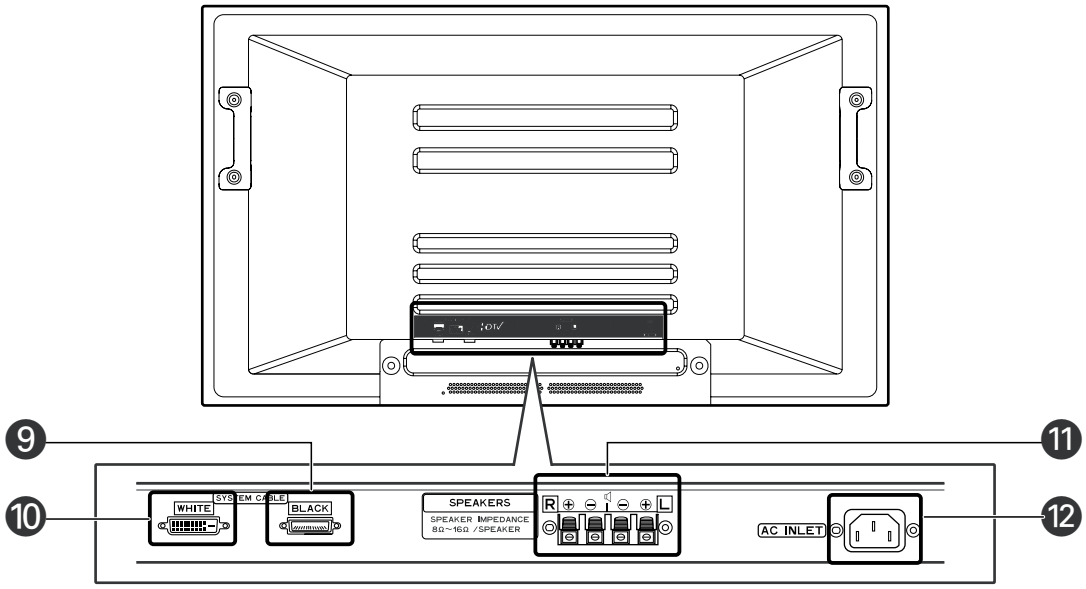
■ PLASMA DISPLAY (PDP-434PU, PDP-434PG, PDP-434PE)

• Front view



① POWER button
② STANDBY indicator
③ POWER ON indicator
④ Remote control sensor
⑤ STANDBY/ON button
⑥ INPUT button
⑦ VOLUME +/– buttons
⑧ CHANNEL +/– buttons

• Rear view



The terminals have faced downward.

❾ SYSTEM CABLE terminal (BLACK)
❿ SYSTEM CABLE terminal (WHITE)
⓫ SPEAKER (right/left) terminals
⓬ AC INLET terminal